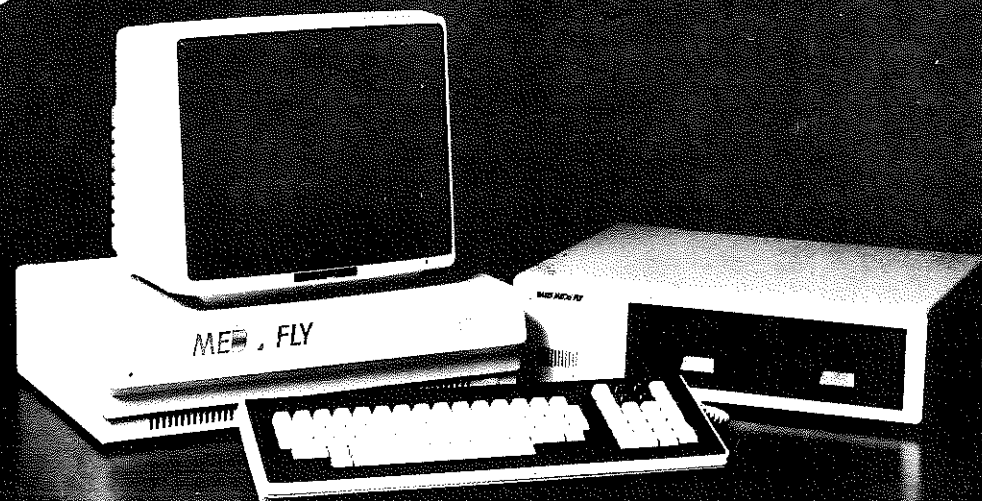


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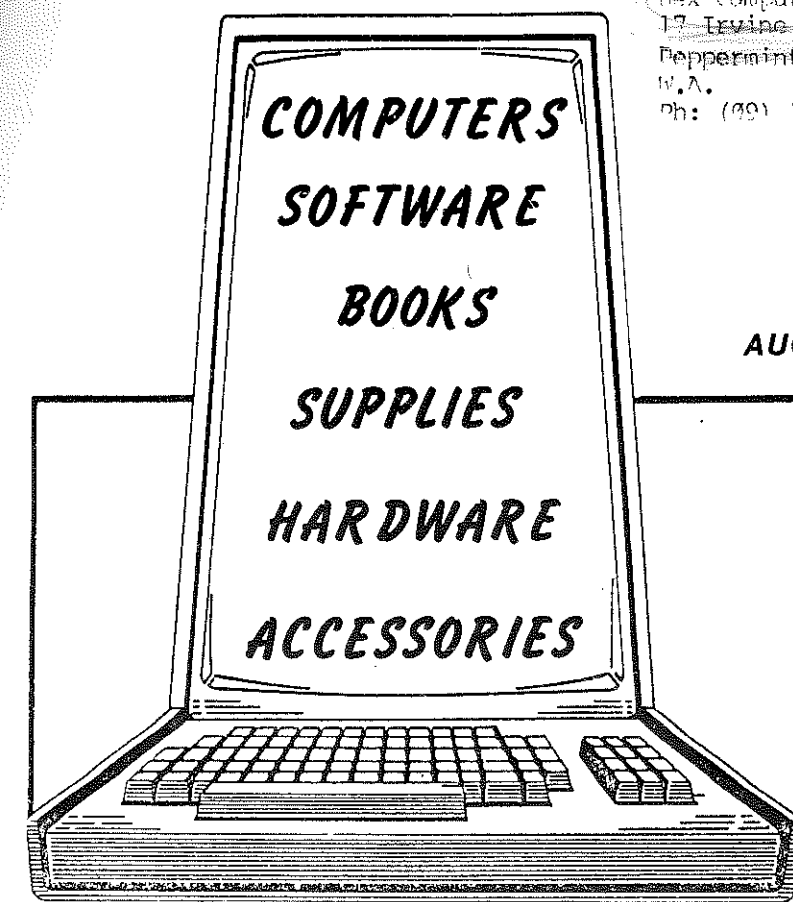


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**AUGUST 1983**



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#### Hours.

Our vocaphone operates 24 hours a day.

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Most modems sold operate on the Bell American system rather than the Australian CCITT SYSTEM. Consequently they are not Telcom approved. They provide a means to communicate with Americans or with Australians also using modems on the Bell standard. They cannot communicate with Australian data banks using the CCITT standard.

## Electrical Goods

Computers, printers, monitors and other electrical goods advertised may not be available for 240 volts. We will enquire for you. A 240 to 110 volt transformer costs around \$50. Australian.

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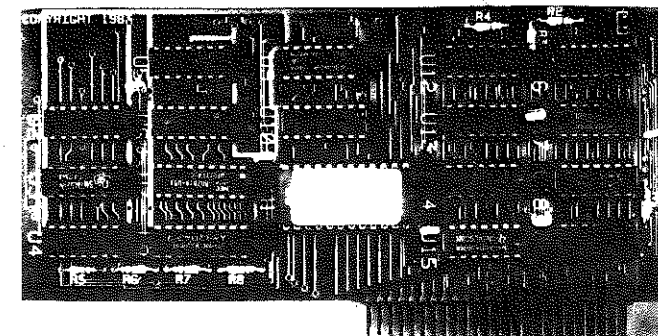
## REPLAY II

### Apple Program Copy And Development System

Now for  
Ile Also

- Disk Formatting Irrelevant
- Does not interfere with other cards
- Card is transparent until copy is desired
- Copies all 64K with \*no\* compression
- Menu driven
- Copy and restart in under 15 seconds
- Copies memory resident programs
- Analyze programs
- Development tool
- Transparent step & trace
- Backwards & forward disassembly scroll

*Reviewed in Hardcore Magazine  
Softkey Publishing  
"The Replay card is very easy to use and  
understand... of all the cards I have used,  
I have found the Replay II to be the most  
powerful card available."*



#### Why ours is better!

1. Accurate copy of memory
2. Language card not needed to copy or run - when using Replay Card
3. Fast copy & restart  
- 15 seconds -
4. Analysis programs and 60 pages of documentation
5. Copy system in eeprom  
- No need to boot other disks at copy time -

To order or request info:  
Write or call

HEX COMPUTING are Australian dealers for Replay II cards. These cards are now in stock in Perth and can be mailed to you immediately.

PRICE: AUST. \$175.00

For Apple II+ or IIe

REPLAY II is intended to be used as an analysis tool, for program development, and for making archival backup copies

\*Apple is a registered trademark for Apple Computers Inc.

REPLAY II is an interface card that is slot independent. Users can stop a program, examine and change memory, or copy the program, and restart. Control of the APPLE is obtained by pressing the remote switch which comes on an 18 inch cord outside the APPLE. REPLAY II does not copy the original disk, rather it copies the program executing in memory. If a copy is desired a blank disk is inserted in drive 1 and the options on the menu are contained in the eeprom on the REPLAY II card, no other disk needs to be booted for copying, unlike other copy cards. The very act of booting another disk alters memory which is detectable by some protected software.

REPLAY II does not change ANY memory. Extra memory is buffered to allow copying and analysis without altering the original memory contents. Other copy cards always change specific points in the original memory. REPLAY II faithfully reproduces the lower 48K of memory in a fast load format. The upper 16K can also be copied for a 64K copy. Standard DOS 3.3 files are created automatically for storage on floppy or hard disks. A RAM card is needed for this.

REPLAY II is fully documented in a 60 page manual. Utility programs supplied with the REPLAY II card include Program Analysis, Comparisons, Packing and Compression. A language card is not needed to run packed program copies.

Because most programs are written in Assembly language, the user should be familiar with Assembly in order to fully utilize the advanced Analysis and Packing programs. Users can now freeze a binary program and perform a transparent step or trace while continuous disassembly is shown. View text or hires during trace.

REPLAY II can automatically move protected APPLESOFT programs to a standard DOS 3.3 disk for listing or modification.

Now game players can save a game at any level and QUICKLY restart with the REPLAY II card. Users can freeze games, change variables to obtain unlimited ships or power, etc., then restart the program. Saving high scores is easy!

Minimum requirements are an APPLE II and a single disk drive.

REPLAY II is a card designed for many different uses. It can be used to copy programs executing in memory for backup purposes. The backup can then be used and the original kept in a safe place.

The Replay Card can also be used for program development or analysis. Since all memory is preserved the Replay card can be used to develop or analyze programs with the knowledge that using the card does not effect the original program.

A program can be stopped at any point desired. The following menu will appear when the user stops a program by pushing the button on the Replay cord.

```

(*) REPLAY II (*)
C) COPY
M) MONITOR
B) BOOT 16 SECTOR DISK
E) BOOT REPLAY DISK
R) RESTART
V) SCREEN (1)   S) RAM/ROM/SLOT ( )
L) VIEW SCREEN
  
```

All of the options are contained in the eeprom on the Replay card. While Replay is in control the original memory is not altered unless requested by the user. A monitor is one of the options of the menu. If that option is selected the following screen will appear.

```

(*) REPLAY MONITOR (*)   PC = xxxx
ON STACK = xxxx xxxx HOOK IN = xxxx OUT = xxxx
A = xx X = xx Y = xx SP = xx
                                SV*BDIZC
$3F2 RESET VECTOR = xxxx STATUS = xxxxxxxx
M,P,L,S,W,Q,##,##,##W,##,##,A]
  
```

M = display this screen  
W = clear memory  
P = APPLESOFT ptrs displayed  
L = display memory as hex and ASCII  
: = set memory to entered value  
/ = search memory for entered value

Stack and input/output hooks displayed  
Reset vector shown.  
Status flags visible and labelled

There are monitor commands for displaying, searching or changing memory. APPLESOFT BASIC pointers can also be displayed in the format shown below.

```

(*) APPLESOFT POINTERS (*)
PROGRAM START ($67) = xxxx   END ($AF) = xxxx
VARIABLE END = xxxx   STRING END = xxxx
FREE MEM = xxK   CURRENT LINE = xxxx
  
```

ENHANCED versions of the Replay eeprom will be released in the future with more options for development and analysis. Remember that memory is preserved so that these options are transparent to the program being worked with.

Why the REPLAY II card is better:

1. Accurate copy of memory. Extra memory is buffered in to obtain an accurate copy of memory for your backup. Other cards alter memory. Even a slight change in memory can change the operation of your program when it restarts.
2. Language card not needed to copy or run. When using the REPLAY II card the language card is not needed. Copies can be made and executed by the Replay card. A language card allows some enhancements but is not required in the minimum configuration.

3. FAST copy and restart. The user can ==
  - A. Stop a program
  - B. Copy lower 48K
  - C. Restart program

In under \*\* 15 \*\* seconds!!! 64K copies take only slightly longer. Game players have instant freeze, copy, restart for fast play. Restart of a previous copy is fast, also.

4. Analysis programs and 60 pages of documentation. The user is supplied with extensive documentation covering many different uses of the card.

5. Copy system in eeprom, no need to boot other disks at copy time. This eliminates the need to keep a separate disk immediately on hand just to load in the copy software. Loading in the copy software also alters memory irrevocably!

Standard DOS 3.3 files of the copied program are created automatically. Two standard binary files are created of the lower 48K program memory.

Some uses of the Analysis programs are:

- A) searching copied programs for code/ASCII areas
- B) condensing copied programs to minimum size.
- C) comparing copies of programs for differences
- D) comparing standard DOS to nonstandard DOS, find differences
- E) disassemble copied programs for analysis and modification

Memory resident programs are those programs that totally load into memory to execute. Many programs such as spreadsheet programs and games usually fall into this category.

Multiple access programs such as large adventure games or multiple module programs are copyable by users with experience. The Replay card can be used as a tool to analyze the software. Suggestions are given in the documentation.

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3086 APPLICATIONS, 6502 14  
3044 BASIC EXERCISES FOR THE APPLE 13  
3045 BASIC EXERCISES FOR THE IBM PC 14  
3046 BASIC FOR BUSINESS 14  
3047 BASIC PGMS FOR SCIENTISTS & ENGR 16  
3048 BEST OF CP/M SOFTWARE 13  
3049 BEST OF IBM PC SOFTWARE 10  
3050 BUSINESS GRAPHICS FOR THE IBM PC 16  
3051 CELESTIAL BASIS 14  
3052 COMMODORE 64 BASIC HANDBOOK 10  
3053 COMPUTER POWER FOR LAW OFFICE 20  
3054 CP/M HANDBOOK 15  
3055 DOING BUSINESS WITH PASCAL 18  
3056 DOING BUSINESS WITH SUPERCALC 13  
3057 DOING BUSINESS WITH VISICALC 12  
3058 DON'T! 12  
3059 EASY GUIDE TO YOUR APPLE II 10  
3060 EASY GUIDE TO YOUR COMMODORE 64 8  
3061 EXECUTIVE PLANNING WITH BASIC 14  
3062 FIFTY BASIC EXERCISES 13  
3063 FORTRAN PGMS FOR SCIENTISTS 17  
3064 FROM CHIPS TO SYSTEMS 18  
3065 GETTING RESULTS W/WORD PROCESSNG 13  
3066 IBM PC CONNECTION 14  
3067 IBM PC DOS HANDBOOK 10  
3068 INSIDE BASIC GAMES 15  
3069 INTNL MICROCOMPUTER DICTIONARY 4  
3070 INTRODUCTION TO PASCAL 17  
3071 INTRODUCTION TO UCSD p-SYSTEM 16  
3072 INTRODUCTION TO WORD PROCESSING 13  
3073 INTRODUCTION TO WORDSTAR 12  
3074 MASTERING CP/M 17  
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3077 MICROPROCESSOR INTERFACING TECH 19  
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3083 PROGRAMMING THE 8086/8088 15  
3084 PROGRAMMING THE Z80 17  
3085 PROGRAMMING THE Z8000 16  
3087 USEFUL BASIC PGMS FOR IBM PC 9  
3088 VISICALC FOR SCIENCE/ENGINEERING 14  
3090 YOUR FIRST APPLE II PROGRAM 10  
3089 YOUR FIRST BASIC PROGRAM 10  
3091 YOUR FIRST COMPUTER 9  
3092 Z80 APPLICATIONS 15

## BOOKS

NMBR N ITEM LIST AAA#

## \*\* TAB BOOKS

3118 A-Z BOOK OF COMPUTER GAMES, HORN 9 8  
3110 ADVANCED PROGRAMS IN BASIC, 55 10 9  
3125 APPLE II BASIC 13 11  
3121 ART OF CMPTR PROGRAMMING, DRURY 11 9  
3105 CHALLENGING COMPUTER GAMES, 33 9 8  
3111 COMPUTER GRAPHICS, 29 READYTORUN 10 9  
3116 COMPUTER PGMS FOR HOME, CHANCE 10 9  
3120 FROM BASIC TO PASCAL 11 9  
3124 GAMES OF SKILL/CHALLENGE IBM PC 13 11  
3123 GRAPHICS PGMS IN MICROSOFT 11 9  
3122 INVEST ANALYSIS, SPARKS 13 11  
3109 MICROCOMPUTERS, DIRKSEN 12 10  
3117 MORE TESTED READYTORUN, HORN 9 8  
3115 MOST POP SUBROUTINES IN BASIC 10 10  
3112 PLAYING STOCK & BOND MARKET 10 9  
3119 PRACTICAL PGMS IN BASIC, 57 10 10  
3107 PROGRAMMING YOUR APPLE, BRYAN 10 9  
3108 READY TO RUN PGMS IN BASIC, 67 9 8  
3114 TESTED READYTORUN, 24, TRACTON 10 9  
3113 THE BASIC COOKBOOK, TRACTON 7 7  
3104 THINGS TO DO WITH YOUR PC, 1001 10 9  
3106 WHAT TO DO. HANDS ON A MICRO 11 9

## \*\* THE BOOK COMPANY

3169 APPLE GRAPHICS & ARCADE DESIGN 20 16  
3170 THE BOOK OF APPLE SOFTWARE 1983 20 14  
3171 THE BOOK SPRING 82 UPDATE 6 6  
3172 THE BOOK SUMMER 82 UPDATE 6 6  
3173 WHAT IF? 20 16

## \*\* VISICORP

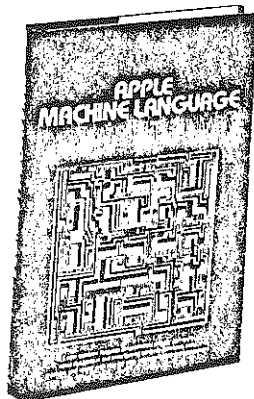
3291 VISICALC ADVANCED VERS WORKSHEET 19 17

## \*\* WADSWORTH ELECTRONIC PUBLISHG

3316 SURVIVAL KIT FOR APPLE. GAMES 10 9

Personal  
Computers are  
Becoming more  
Visible.

APPLE



### Apple Machine Language Don Inman/Kurt Inman

Here at last — a machine language programming book that's fun and entertaining. An all new approach — starring the Apple System Monitor. In just a few, quick stages the user makes the transition from BASIC to direct machine language programming.

#### HIGHLIGHTS

- Color, graphics, and sound.
- Step-by-step program demonstrations.
- Self-check exercises.
- Illustrations galore.
- A complete and easy guide to make the user an expert!

R0230-4 paper

### Pascal Programming for the Apple

J.C. Lewis

An easy-to-understand introduction to UCSD Pascal. It discusses features unique to UCSD Pascal on the Apple II. For both the hobbyist and the professional.

#### HIGHLIGHTS:

- Includes the fundamentals of the Pascal system and review of the language.
- Scores of ready to run.
- Special applications for home mortgage payments, stock market charting, and cash flow analysis.
- Fun with music, sound, and graphics.
- Implementing large programs on small computers.

R5454-5 paper

### The Academic Apple

Richard Mowe

Written for those parents and teachers who are interested in helping youngsters learn with the aid of an Apple computer. The writing style is kept simple without a lot of technical jargon. An excellent guide for parents.

#### HIGHLIGHTS:

- Discusses a child's growth and development (starting at age 5) and how it relates to the child's ability to use the computer.
- Comparisons and recommendations of educational and commercial software.
- Explains how to write simple programs and uses many sample programs as a guide for users.
- Discusses typing and writing skills and shows how word processing can greatly improve writing ability.

R0034-0 cloth

### The Elementary Apple

William B. Sanders

An ideal introduction to the workings of the Apple II Plus computer. It is kept at an introductory level, but when the user is finished, he or she will be able to write and use their own programs. This is an excellent aid in getting over any initial fear of the computer.

#### HIGHLIGHTS

- There are plenty of explanations of programs for business and word processing programs.
- Includes plenty of tips and hints about how to do things the right and wrong way.

R1659-3 paper

### Kids & the Apple

Edward Carlson

An excellent, step-by-step approach to BASIC programming on the Apple computer. Arranged in lessons, the book starts with an introduction to programming and progresses to topics such as editing and debugging.

#### HIGHLIGHTS:

- Suitable for ages 12 and up.
- Filled with entertaining cartoons that help explain complex points.
- Written in easy-to-understand language.
- Many fun questions and problems with answers.
- Each concept and example is tied to everyday experiences.

R3669-0 paper

### The Apple Logo Primer

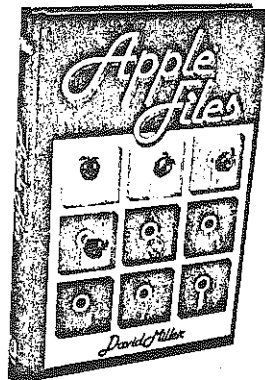
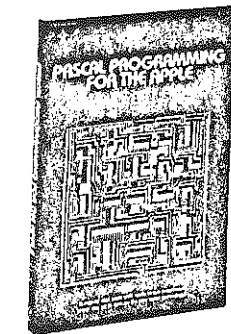
Gary G. Bitter/Nancy Watson

Find out what an exciting, useful, and creative language Logo really is! This handbook makes learning Logo with an Apple II easy for anyone — no previous experience needed! With simple to follow instructions, many examples, and a thorough discussion of all concepts, this book is truly "user-friendly." Suggested activities encourage learning Logo through discovery and exploration.

#### HIGHLIGHTS:

- Covers all the major Logo topics; procedures, recursion and coordinates, the REPEAT capabilities, screen commands, and the Logo library.
- Step-by-step Logo section for beginners.
- Quick-start section for experienced users.
- Commands, commonly-used procedures, and error messages are listed on inside covers for easy reference.

R0314-6 paper



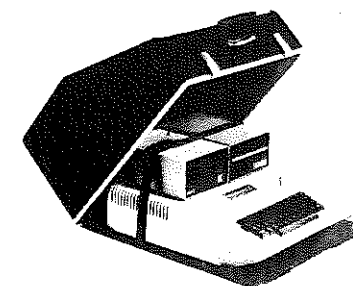
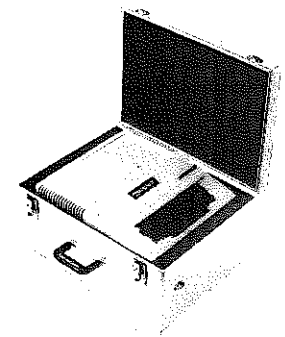
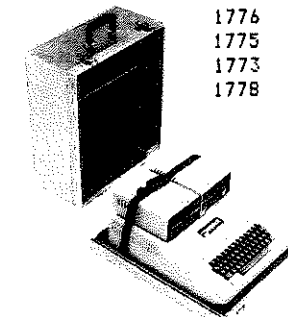
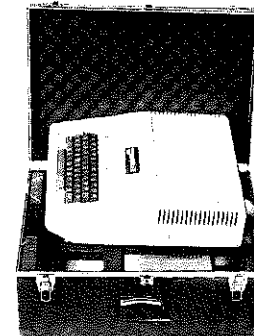
Continued from Page 6.

disk. The other kit didn't. The idea is to clean the tiny read/write head inside the disk drive with the spinning cleaning disk.

If any disk drive read/write heads are going to be in need of cleaning, it's ours. You can imagine how intensively we use our disk drives copying thousands of disks. Well after "cleaning" the six of them, we saw absolutely no evidence of any cleaning! The white cleaning disk was still lily-white. We believe head cleaning kits are a "GIMMICK" that should be priced very inexpensively along with cleaning solvent and cotton swabs! When they are they may be worth whatever "cleaning" they perform on Apple Disk drives, if any.

Incidentally, don't use a cotton swab nor just any solvent to clean the read/write head in your disk drives without first giving the stuff this simple test. Take a clean mirror and place a couple drops of the "solvent" on the mirror. Wait for it to evaporate. If there is any visible residue, don't use the stuff. Now try a couple drops of gin or grain alcohol (the drinking kind from your liquor store). Well, how about that. Much less residue, if any. We found our brand of gin left NO residue.

Since we use both sides of many disks, the part we would like to be able to clean, is the felt pressure pad immediately above the tiny glass-eye read/write head. The felt pad presses the disk surface against the read/write head, sandwiching the disk between them. The felt pad actively collects dust, metal oxides, etc., from the surface of the disks. However the instructions forbid turning over the "cleaning" disk to "clean" the pressure pad, which makes good sense because the stuff it will rub off the pressure pad will then be rubbed onto the read/write head the



## COMPUTER CARRYING CASES

NMBR N ITEM

LIST AAA\$

### \*\* CASES INC

1340	APPLE II & 1 DR 2 DRIVES-2" FOAM	343	286
1336	APPLE II & 2 DRIVES	250	214
1341	APPLE II & 2 DRIVES/APPLE 3 MON	351	293
1338	APPLE II ONLY	234	200
1339	APPLE II/2 DRIVES/MX80/9" SANYO	347	290
1337	APPLE III & 2 DRIVES	291	249
1343	CASTERS ADD...	53	47
1342	LOCK ADD...	23	20

### \*\* COVER CRAFT

1497	FIELD-PRO APPLE/FRANKLIN CASE	80	55
1496	FIELD-PRO CASE 20Wx15DxBH	70	49
1495	FIELD-PRO CASE 25Wx20DxBH	80	55

### \*\* FIBERBILT

1777	APPLE/1-3 DRIVES,12" MON/ALUMINU	245	188
1772	APPLE/2 DRIVES/DISKS/ALUMINUM	209	160
1774	APPLE/2 DRIVES/DISKS/POLYPLEX	135	104
1776	APPLE/2 DRIVES/MX80/POLYPLEX	175	135
1775	APPLE/2 DRIVES/REMOV LID/ABS	65	52
1773	APPLE/2 DRIVES/REMOV LID/ALUMINM	206	158
1778	MONITOR & EPSON MX80/FIBREX	210	162

next time you "clean" it. Of course, if you use only one side of your disks then the pressure pad never touches the recording side of your disks; thus, apparently there is no need to clean it. In any case, the pressure pad can be replaced rather quickly with a clean new one.

All the above applies only to 5-1/4" disk drives with ONE read/write head such as used with Apple. Drives of different configuration, such as double headed mechanisms and 8" drives, may need cleaning.

Continued on Page 39.

Prices in this catalog supercede all prices in previous catalogs. Prices subject to change without notice. We reserve the right to correct typographical pricing errors.



# COMPUTER DUST COVERS

NMBR N ITEM LIST AAA\$

## \*\* ASTAR INTERNATIONAL

### > BLUE PLASTIC

1244	APPLE II	10	8
1243	APPLE II & DISK DRIVE	14	11

## \*\* COVER CRAFT

### > CLEAR PLASTIC

1500	APPLE II	9	8
1509	APPLE II & 12Hx16Wx13D MONITOR	13	11
1505	APPLE II & 2-5" DRIVES	9	8
1507	APPLE II & 9" SANYO	13	11
1501	APPLE II & AMDEK COLOR 1	13	11
1502	APPLE II & MONITOR III	13	11
1503	APPLE II & NEC JB1201	13	11
1508	APPLE II, 12" SANYO & 2 DRIVES	13	11
1506	APPLE II, 9" MONITOR & 2 DRIVES	13	11
1504	APPLE II, NEC JB1201 & 2 DRIVES	13	11
1532	NEC PC8001A	9	8
1533	NEC PC80121 I/O UNIT	9	8

## \*\* SOUTH COAST ENTERPRISES

2879	CLEAR PLEXIGLAS LID FOR APPLE II	25	19
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## \*\* SOUTH COAST ENTERPRISES

### > TAN PLASTIC

2886	APPLE & 2 DISK DRIVES	14	12
2892	APPLE & AMDEK COLOR	14	12
2891	APPLE & AMDEK GREEN	14	12
2888	APPLE & NEC COLOR	14	12
2889	APPLE & NEC GREEN	14	12
2883	APPLE II	10	9
2887	APPLE, 9" MON & 2 DRIVES	16	14

# COMPUTER FANS

NMBR N ITEM LIST AAA\$

## \*\* KENSINGTON MICROWARE

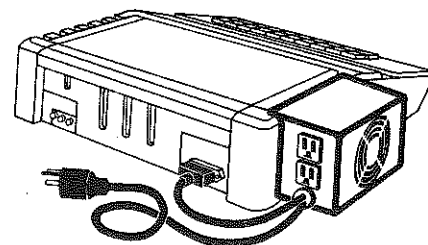
1985	SYSTEMS SAVER FAN	90	76
1986	SYSTEMS SAVER FAN 220VAC	90	79

## \*\* M&R ENTERPRISES

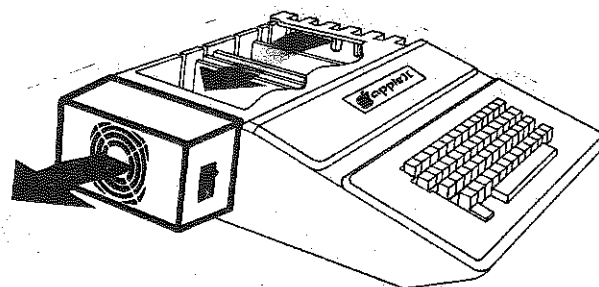
2043	SUP'R FAN - MOUNTS INSIDE	50	40
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## \*\* RH ELECTRONICS

	SPECIFY TAN OR BLACK!		
2658	SUPER FAN II	75	61
2659	SUPER FAN II W/ZENER RAY	109	84



JUST CLIPS ON.  
NO MOUNTING OR  
HARDWARE REQUIRED.  
COLOR MATCHED TO  
APPLE II.



## \*\* APPLE COMPUTER

1141	APPLE IIE 64K-COMPUTER ONLY	1450	
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## \*\* AXLON

1276	DATALINK ACOUSTIC COUPLER	80	70
1278	RF VIDEO INTERFACE	140	119
1273	^ DATALINK 1000 PC	299	250

## \*\* BASIS

	> PRONOUNCED BAH-SES		
3412	BASIS 108 128K 2 DRIVES	2895	2309
1279	BASIS 108 128K 2 DRIVES & CP/M 3	2995	2361
1956	^ APPLESOFT EPROMS BY JIM FITCH	80	
	^ NO MONITOR		
3413	^ RAM CARD 256K	695	575
3414	^ RAM EXPANSION KIT 64K & DISK	195	168

## \*\* COLECO INDUSTRIES

	> COMING SOON		
1360	ADAM FAMILY COMPUTER SYSTEM	600	

## \*\* COMMODORE

1361	> COMMODORE 64 COMPUTER	595	218
1367	AUTOMODEM & SOFTWARE ON DISK	149	92
1370	COLOR MONITOR	299	260
1369	COLOR PRINTER/PLOTTER 4 PENS	199	174
1366	CP/M 2.2 OPERATING SYSTEM	60	55
1363	DATASETTE TAPE RECORDER	75	69
1364	DISK DRIVE 5 1/4" 5"	399	263
1368	DOT MATRIX PRINTER 80CPS 30CPS P	395	238
1365	DOT MATRIX PRINTER 80CPS 8CPS S	495	331
1371	GAME PADDLES	15	13
1372	JOYSTICK	9	8
1377	MEMORY EXPANSION 16K	80	78
1373	PHONE ADAPTER-NONMODULAR PHONES	20	20
1374	SERIAL MODEM INTERFACE	50	46
1362	VICMODEM & SOFTWARE ON TAPE	100	57

## \*\* CORONA DATA SYSTEMS

1469	> ADD ON 128K MEMORY	295	
1468	> ADD ON 320K DISK DRIVE	450	
1463	PC 128K/CRT/CPM86/1 DRIVE	2595	
1465	PC 128K/CRT/CPM86/10MB DRIVE	4495	
1464	PC 128K/CRT/CPM86/2 DRIVES	2995	
1466	PORTABLE PC/1 DRIVE	2545	
1467	PORTABLE PC/2 DRIVES	2945	

# COMPUTER SYSTEMS

NMBR N ITEM LIST AAA\$

## \*\* EAGLE COMPUTER

1643	EAGLE 1620 128K 2 QUAD DRIVES	4495	3658
1644	EAGLE I 64K SYSTEM 1 DRIVE	1595	1427
1645	EAGLE II 64K SYSTEM 2 DRIVES	1995	1780
1646	EAGLE III 64K SYSTEM 2 DRIVES	2995	2465
1647	EAGLE IV SYSTEM 2 DRIVES 1 HARD	3995	3288
1650	EAGLE PC-1 128K 1 DRIVE	2995	2465
1651	EAGLE PC-2 128K 2 DRIVES	3495	2876
1642	EAGLE PC-E 64K 1 DRIVE	1995	1661
1652	EAGLE PC-XL 2 DRIVES 1 HARD	4495	3657
1648	^FILE 10-10MB ADD ON HARD DISK	2495	2077
1649	^FILE 40-32MB ADD ON HARD DISK	3995	3289
	^SPECIFY SERIES FOR FILE 10/40!		

## \*\* FRANKLIN COMPUTER

1796	ACE 1000		909
1797	ACE 1200	1895	1625
1798	ACE PRO	1595	1286

## \*\* LEXICON

2019	LEX-21 INFORMATION TERMINAL	995	848
2018	LEX-31 COMPUTER	995	848
2021	^ACOUSTIC CUPS LEX21/31	53	49
2022	^PRINTER PAPER LEX31	3	3
2020	^VINYL CASE LEX21	30	28

## \*\* LOBO SYSTEMS INTERNATIONAL

3411	MAX-80 128K Z80B & CP/M COMPUTER	945	
3413	MAX-80 DUAL 5" 5 1/4" DD 40T DRIVES	585	
3412	MAX-80 LDOS OPERATING SYSTEM	69	

## \*\* NEC HOME ELECTRONICS

2221	PC 8000 64K COMPUTER SYSTEM	2999	2471
	PC 8000 SYSTEM INCLUDES....		
2222	PC 8001A 32K COMPUTER	995	789
2223	PC 8012A 32K I/O UNIT	649	521
	PC 8023A 100CPS 80CPS PRINTER	619	436
2224	PC 8031A DUAL 5" DRIVES	995	789
2225	PC CP/M OPERATING SYSTEM	150	131
	PC GREEN 12" JB1260M(A) 15MHz	150	122
	PC REPORT MANAGER SOFTWARE	200	149

## \*\* NEC INFORMATION SYSTEMS

2229	APC H01 SYSTEM 128K 1 1/2" DRIVES	2748	2224
2230	APC H02 SYSTEM 128K 2 1/2" DRIVES	3448	2758
2231	APC H03 SYSTEM COLOR 2 1/2" DR	4198	3358
2237	COMMUNICATION CONTROLLER	335	285
2238	COMMUNICATION RS232 CABLE	85	76
2240	HARD DISK 10MB SYSTEM	2698	2377
2241	HARD DISK 10MB W/O CONTROLLER	2398	2113
2233	MONO/GRAPH BOARD FOR H01	448	381
2234	MONO/GRAPH BOARD FOR H03	648	544
2232	RAM 128K ADDITIONAL	700	588
2235	RAM BOARD 128K FOR H01/H02	598	502
2236	RAM BOARD 128K FOR H03	798	670
2239	SFINWRITER xx30 CABLE	85	76
2243	TEMPLATE BLANK-10	5	5
2242	TEMPLATE PLASTIC-10	45	45

## \*\* NEC INFORMATION SYSTEMS

2244	WPS1-H02 & 3530 PRINTER & DISK	6148	4860
2245	WPS2-H03 & 3530 PRINTER & DISK	6798	5374
2246	WPS4-H03 & 7730 PRINTER & DISK	7398	5849
	^SEE PRINTER ACCESSORIES		
	^UNDER PRINTERS		

## \*\* NORTH STAR

1094	ADVANTAGE 280A 64K 2 5" DRIVES	2999	2469
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## \*\* SANYO

2784	MBC1000 COMPUTER SYS 1 320K DR	1995	1710
2787	MBC1200 COMPUTER SYS 1 640K DR	2295	1912
2788	MBC4000 COMPUTER SYS 1 1.2MB DR	3295	2713
2786	^CRS1100 CRT TERMINAL	695	600
2785	^EDF160 ADD ON 320K DRIVE	695	618

## \*\* STM ELECTRONICS

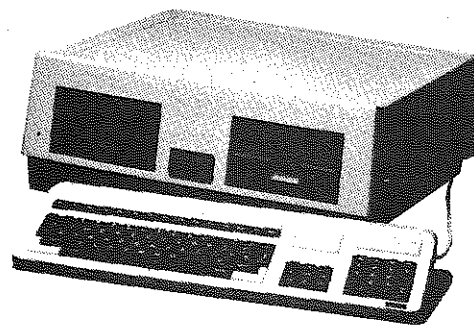
3009	PIED PIPER I 280 64K DS DD DRIVE 1299 1173		
	^W/4 SOFTWARE PACS, NO MONITOR		

## \*\* SYSCOM

3103	SYSCOM 2 48K	895	763
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## \*\* TELEVIDEO SYSTEMS

	> OTHER SYSTEMS AVAILABLE - CALL		
3461	TS16026 8088 128K 2 5" DRIVES	4495	3837
3459	TS802 280A 64K 2 5" DRIVES	3495	2882
3460	TSB02H 280A 64K 1 FLOPPY 1 HARD	5995	4884



Computers...  
They're all the same,  
only different.

The tradition of high quality, high performance German craftsmanship and engineering is legend. And while we most often see that tradition in action on America's streets and highways, it is in America's business offices that its future holds the most promise.

The BASIS 108 is the proof.

This powerful small business computer passes higher-

priced competitors with ease. Its dual processors — for CP/M® and Apple II® compatibility — open up the largest library of microcomputer software and plug-in peripherals available today.

This unique combination also provides compatibility with other popular languages, including Pascal™ and LOGO™.

The detached keyboard is a work of art and practicality. Lightweight and low profile, it features a full one-meter cord for comfortable operation on your desk — or your lap. There's a full 128-key ASCII character set. Fifteen user-definable function keys that can provide access to 60 distinct functions. A nine-key cursor control block. And a convenient eighteen-key numeric pad. For special applications, you can also custom map the keyboard with a simple exchange of ROMs.

And there's more. RGB and composite NTSC or PAL video. Keyboard-selectable 80- or 40-column display.

High resolution color graphics. Parallel and serial printer interfaces. Easily accessible outboard I/O connectors. Six Apple II-compatible card slots for peripherals expansion. Even a two-inch alarm or music speaker.

The BASIS chassis is cast aluminum, eliminating heat and RFI interference problems. And there's plenty of room for internal expansion to include hard disk drives and other peripherals.

The BASIS 108. Microcomputing's "Best Of Both Worlds." German craftsmanship and American business savvy. CP/M-based business computing and Apple II-based personal computing. High performance and surprisingly low cost. The BASIS 108. A computing machine finely tuned to handle the fast tracks of business today. Call your BASIS dealer for a test drive. Or call toll free in the U.S. (800) 222-0626.



**BASIS**  
INCORPORATED

5435 Scotts Valley Drive  
Scotts Valley, CA 95066  
(408) 438-5804 TWX: 910-598-4512

## THE EAGLE PC SIMPLY, A BETTER PC

**EAGLE**  
COMPUTER

## ■ IBM™ Personal Computer Compatible

## ■ Elegantly User Friendly

## ■ High Density Floppy Disk Storage

## ■ Word Processing, Financial Planning, and Two Operating Systems Included

## ■ Compact Enough to be Transportable

## ■ Retractable Keyboard

Simplicity with elegance. The Eagle PC is a compact, modular business computer system for the serious user with an eye to his budget. Designed for personal and business applications, the Eagle PC is hardware and software compatible with the IBM™ Personal Computer, thus offering access to a variety of applications software. As with all Eagle Computers, the Eagle PC's are available in some versions as a fully configured system with an elegantly user friendly interface. The Eagle PC may also be built up from a base system configuration, allowing the user to add options as desired.

Each double density, double sided floppy disk drive provides an equivalent of approximately 250 pages of text. Unformatted capacity is 500 kilobytes, 360 formatted. Additional storage is available with the Eagle File 10 or File 40, storing 10 or 32 megabytes (formatted) respectively on a Winchester hard disk. A video cassette backup option allows hard disk files to be saved to a standard video cassette recorder.

The handsomely sculpted keyboard conveniently stores beneath the compact main system enclosure to save space. The Eagle PC keyboard is a detached unit connected by a lengthy recoiling cord to allow operator positioning. It provides 105 key stations with 24 dedicated function keys to simplify word processing and financial planning. The 83 keys of the IBM PC are a subset of the 105 keys of the Eagle PC keyboard.

The Eagle PC was designed for the first-time computer user. The Eaglewriter word processing software included with a complete system uses English commands to simplify operation. In addition the word processor is uniquely tailored to the computer with preprogrammed function keys that perform with a single keystroke word processing tasks that would normally require several keystrokes on other computers. Built-in "help" instructions are also called up by pressing a single key. Also

included are word processing features such as mail merge, forms creation, alphabetization, boilerplating.

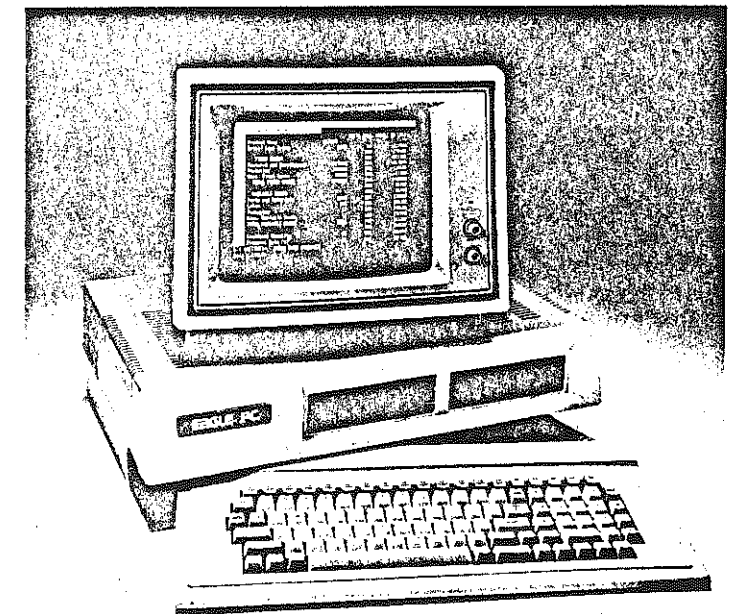
Financial Planning software is made easy with the comprehensive Eaglecalc electronic financial planning worksheet designed to replace manual methods of calculation. Answers to problems previously requiring hours to solve are swiftly calculated and clearly displayed within seconds. 255 rows and 64 columns of data can be displayed. Most all the standard financial planning operations are supported.

Monochrome, medium resolution, and high resolution color graphics options are offered on the Eagle PC. Monochrome graphics of extremely high quality consist of the 80x25 display, 11x14 dot cell, 7x9 characters, with 720x352 pixels. Medium resolution color graphics consist of 8x8 dot cell, 5x7 characters, with 320x200 pixels at 4 colors and 640x200 pixels at one color. High resolution graphics consist of 9x14 dot cell, 7x9 characters, with 640x400 pixels at 16 colors. The compact monitor is conveniently positioned atop the main system unit for best visibility. An amber monochrome display monitor is also offered as an option.

In office situations requiring multiple work stations, the Eagle PC may be linked with others in a local area network of up to 64 stations. The Eagle PC is offered as an intelligent terminal to be used in a multi-user, multi-tasking environment with the Eagle 1600 series to allow up to 8 Eagle PC's to share the common central processor and data base of the Eagle 1600 (8086, 8MHz).

The Eagle PC offers the processing power of the Intel 8088™ microprocessor. This 16-bit computer-on-a-chip processes more data at once than most personal computers. The standard 64 or 128 kilobytes of random access memory can be conveniently expanded up to 512 kilobytes on the main CPU board. Additional printed circuit boards are not required for memory expansion. Three IBM PC compatible expansion slots allow the addition of peripherals. Included with each system are two serial and one parallel port.

The MS-DOS™ and CP/M-86™ operating systems included with some and available for all models of the Eagle PC ensure compatibility with the IBM Personal Computer. Further ensuring IBM PC compatibility, Microsoft's GW BASIC™ is available as an option for the Eagle PC.





## TeleVideo's TS 802 and TS 802H Computers

### TS 802/TS 802H: Low-Cost, Upgradeable, Power-Packed Computers

Upgradeability is built into TeleVideo stand-alone computers. For example, TeleVideo's TS 802 and TS 802H are single-user computer systems that can be used as satellite stations in a multi-user configuration of up to 16 work stations.

The TS 802/TS 802H are low-cost, powerful, single-user integrated systems that combine TeleVideo's top-of-the-line CRT display with an advanced design Z80A, 64 Kbytes RAM, single board computer. Both models feature a detachable Selectric-style keyboard.

The TS 802 operates with two 5¼ inch floppy disks for 1 Mbyte of unformatted on-line storage. The TS 802H features one 5¼ inch floppy disk and a 5¼ inch Winchester hard disk for an additional 9.6 Mbytes of unformatted data storage.

Serial printers and modems are accommodated through two RS232C serial ports in both the TS 802 and TS 802H systems.

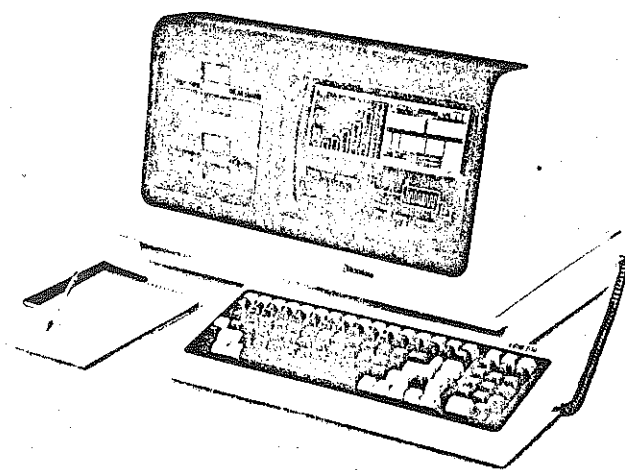
The TS 802/TS 802H, as well as all other TeleVideo computers, use the industry standard CP/M® operating system, the most popular operating system in use today. With access to the largest library of microcomputer software programs available, the TS 802 and TS 802H allow you to meet a wide variety of information and word processing needs.

When it comes time to expand to a TeleVideo multi-user system, you can use either your TS 802 or TS 802H as a satellite user station in TeleVideo's multi-user systems without modifications. Merely attach the system to a TeleVideo TS 806 or TS 816 multi-user computer system.

TeleVideo's multi-user systems support any combination of TeleVideo single-user computers.

Service for TeleVideo computer products is available from TRW Customer Service Division in the U.S., and support elsewhere in the world is provided through local distributors.

TeleVideo is ready to grow when you are. Write or phone us to learn more about the low-cost TS 802/TS 802H computer systems.



CP/M® is a registered trademark of Digital Research Inc.

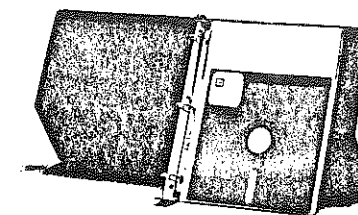
**TeleVideo Systems, Inc.**

## BINDERS/PLASTIC PAGES

NMBR	N	ITEM	LIST	AAA#
** ADVANCE BINDERY				
1046		D-RING BINDER 11x8.5x1"	5	4
1044		D-RING BINDER 11x8.5x1.5"	7	5
1045		D-RING BINDER 11x8.5x2"	8	6
** COVER CRAFT				
1492		PLASTIC PAGES 5"-10 PAC	9	8
1493		PLASTIC PAGES 8"-10 PAC	9	8
** PACIFIC EXCHANGES				
2392		PLASTIC PAGE CLEAR 1-8" 10 PAC	9	7
2391		PLASTIC PAGE CLEAR 2-5" 10 PAC	9	7
** RING KING VISIBLES				
2732		BINDER FILE 20-5" PCLB20	13	9
2718		EASEL BINDER 1" 85111	9	7
2719		EASEL BINDER 1.5" 85111.5	10	8
2720		EASEL BINDER 2" 85122	11	8
2721		EASEL BINDER 2.5" 85112.5	12	9
2733		MINI BINDER FILE 20-5" PCMLB20	10	8
2722		MINI EASEL BINDER 1" 06951	6	5
2729		MINI PLASTIC PAGE 2-5" MMD02 10	8	6
2730		MINI PLASTIC PAGE 4-5" MMD04 10	9	7
2728		PLASTIC PAGE 1-5" MD01 10 PAC	10	7
2725		PLASTIC PAGE 1-8" FD01 10 PAC	12	9
2727		PLASTIC PAGE 2-5" MD02 10 PAC	9	7
2724		PLASTIC PAGE 2-8" FD02 10 PAC	11	8
2726		PLASTIC PAGE 4-5" MD04 10 PAC	10	7
2723		PLASTIC PAGE 4-8" FD04 10 PAC	13	9
2731		WALLET FOR 10-5" DISKS PCMDW10	6	5
** SYNCOM				
3093		PLASTIC PAGE 2-5" DISKS 10 PAC	11	6

## DISK CASES/MAILERS

NMBR	N	ITEM	LIST	AAA#
** COVER CRAFT				
1490		DISK CASE 5"-3 PAC	12	10
1491		DISK CASE 8"-3 PAC	25	20
** RING KING VISIBLES				
2696		DISK CARRIER 10PAC 6-5" MDC6	50	33
2698		DISK CARRIER 10PAC 6-5" PCMDC6	50	33
2694		DISK CARRIER 10PAC 6-8" DC6	63	42
2695		DISK CARRIER 16PAC 3-5" MDC3	52	35
2697		DISK CARRIER 16PAC 3-5" PCMDC3	52	35
2693		DISK CARRIER 16PAC 3-8" DC3	72	48
** ROCKROY				
2765		DISCMAILER FOR 1-3 5" DSK 10 PAC	9	8



**EASEL BINDERS**  
Closed, they're trim Books for upright filing. Open, they become free standing easels for hands-free reference. All binders constructed of superior black suede-finish vinyl.

8½ x 11 1" capacity ring	85111	\$6.65
8½ x 11 2" capacity ring	85112	\$8.20
6 x 9 1" capacity ring	06951	\$4.65



### DISCSAVERS™ Color Protective Disk Sleeves

**Color Coded**  
Multi-color DiscSavers are designed for easy recognition of individual disks with your own color-keyed filing system. Ideal for office or home use.

**Protective**  
Custom grain vinyl DiscSavers provide added protection for magnetic disks by guarding against stains, abrasions, spills and other handling hazards.

**Attractive**  
DiscSavers provide a handsome and professional method of single disk storage. Four attractive colors (red, yellow, green and blue) enhance the look of your hardware while protecting your valuable software.

**Durable**  
Rigid vinyl construction protects against constant handling and provides long wear and tear.

**Portable**  
DiscSavers are the only portable vinyl sleeves for use with a single diskette that bear the RockRoy mark of quality.

**ROCKROY**  
Computer Products Division

7721 E. Gray Road, Suite 103  
Scottsdale, Arizona 85260 • (602) 998-1577  
Toll-Free 800-528-2361

## DISK ENVELOPES

** LEADING EDGE				
2003		DISK ENVELOPE 10 TO 90 EACH...	.10	
2004		DISK ENVELOPE 100+ EACH...	.08	
SPECIFY BLACK PAPER OR WHITE TYVEK!				
** ROCKROY				
2764		DISCSAVERS ASSTD COLORS 12 PAC	6	5

# Now you can have D-Ring performance and features in a quality binder without paying premium prices.

## D-Plus Ring Binder Features

**1 Backbone**  
Opens flat and folds back completely for ease of use in restricted space.

**2 Edge Construction**  
Beaded all around, adds to a finished vinyl appearance.

**3 Colors**  
Available in a choice of six popular vinyl colors—black, blue, brown, red, green and white.

**4 Reduces Sheet Wear**  
Back cover mounting of metals eliminates pulling and tension when opening or closing binder cover.

**5 Quality Metals**  
Convenient D-Ring design with nickel-plated, full-spring construction and opening and closing trigger mechanisms.

**6 Choice of Capacities**  
Your choice of four D-Plus sizes—1", 1½", 2" and 3".

**7 Oversized Sheet Lifter**  
Large lifter eases page turning and keeps sheets flat when binder is closed.

**8 Index Tabs Line-up**  
Angled D-Plus ring assures perfect alignment of indexes and sheets for quick and easy reference.

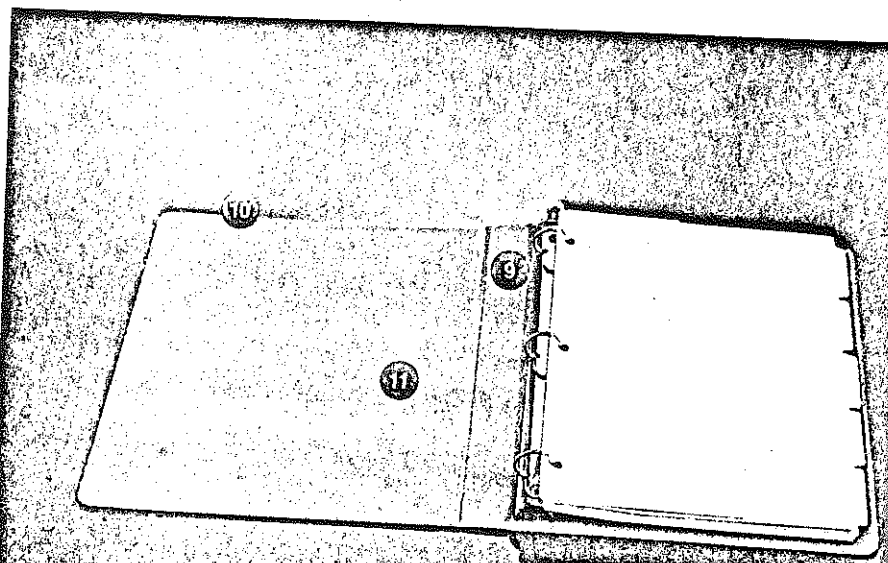
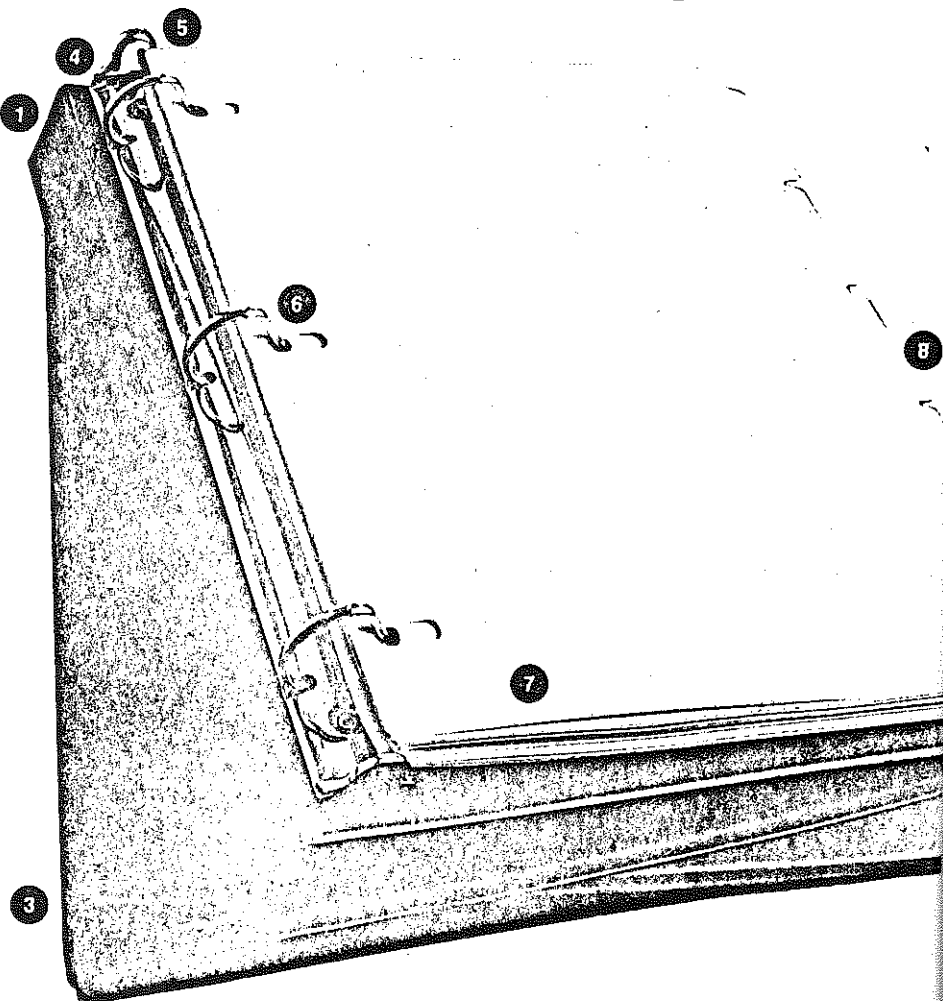
**9 Hinge Construction**  
Special ribbed construction for added strength and longer life without cracking or splitting.

**10 100% Virgin Vinyl**  
Suede finish, heavy-gauge material over sturdy board.

**11 Convenient Pocket**  
Full width pocket in front cover is standard in all D-Plus binders.

**12 Plus—capacity**  
D-Ring design accommodates more sheets in every capacity than conventional round rings of same size.

18



## DISK FILES

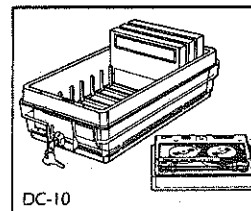
NMBR N ITEM

LIST AAA\$

### \*\* ABA SYSTEMS

1015 FILE BOX DC10 TAPE CARTRIDGES 44 35

Data Cartridge File Box available in one model with key locking removable lid that nests under base. File capacity—10 data cartridges. Suggested retail \$44.00



NMBR N ITEM

LIST AAA\$

### \*\* ABA SYSTEMS

1013	FILE TRAY T115 5" DISKS	24	19
1010	FILE TRAY T120 8" DISKS	32	26
1014	FILE TRAY T145 5" DISKS	30	24
1011	FILE TRAY T150 8" DISKS	36	29
1012	FILE TRAY T85 5" DISKS	20	16
1009	FILE TRAY T90 8" DISKS	22	18
1001	FILEBOX F40 8" DISKS W/LOCK	39	31
1000	FILEBOX F90 8" DISKS W/LOCK	59	47
1003	FILEBOX M35 5" DISKS W/LOCK	29	24
1002	FILEBOX M85 5" DISKS W/LOCK	49	39
1004	TROLLEY FOR 1 F90	74	58
1005	TROLLEY FOR 2 F90	81	64
1007	TROLLEY FOR 2 M85	78	62
1006	TROLLEY FOR 3 F90	84	66
1008	TROLLEY FOR 3 M85	81	64

## Professional Protection For Flexible Discs

Data recorded on flexible discs is usually important — and often confidential. When working with these discs, proper care and controlled access should not be overlooked. ABA Systems of Sweden offers a line

of rationally designed disc file products which can be used alone on a desk or in combination with rolling trolleys that can be quickly positioned near work stations for convenient disc access.

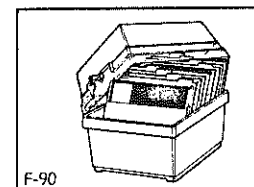
Disc File Boxes available in four models with key locking removable lids that nest under base. Two models each for 8" and 5¼" discs. File capacities—90 or 40 discs.

Suggested retail \$59.00

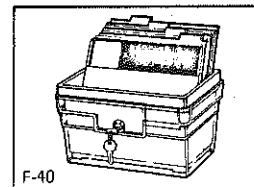
\$39.00

\$49.00

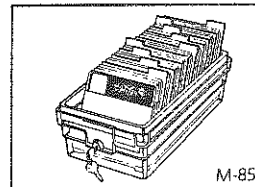
\$29.00



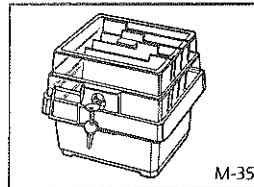
F-90



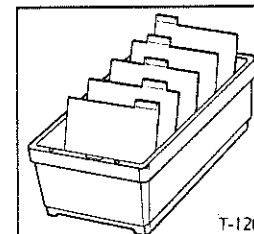
F-40



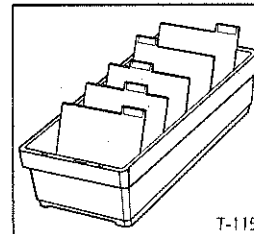
M-85



M-35



T-120



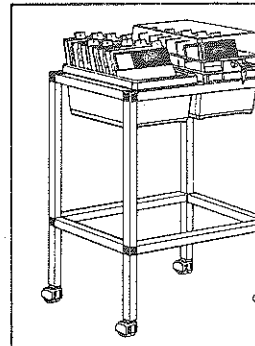
T-115

Disc File Trays without lids available in six models.

Three models each for 8" and 5¼" discs. File capacities—90, 120, or 150 discs.

T-90 90 capacity for 8" \$22.00  
T-120 120 capacity for 8" \$32.00  
T-150 150 capacity for 8" \$36.00

T-85 90 capacity for 5¼" \$20.00  
T-115 120 capacity for 5¼" \$24.00  
T-145 150 capacity for 5¼" \$30.00



**Aluminum Tubular Trolleys** available in five models. Three models for either 90 capacity boxes or trays for 8" discs. Two models for either 90 capacity boxes or trays for 5¼" discs.

4501	Trolley for either one F-90 or T-90	\$74.00
4502	Trolley for either two F-90 or T-90	81.00
4503	Trolley for either three F-90 or T-90	84.00
4602	Trolley for either two M-85 or T-85	78.00
4603	Trolley for either three M-85 or T-85	81.00

### \*\* RING KING VISIBLES

2699	TAPE 12 MINICASSETTE FILE DCT12R	17	17
2701	TAPE 6 MINICASSETTE BINDER DCB06	8	7
2700	TAPE 9 CASSETTE FILE DCT09R	23	16
2702	TAPE CASSETTE LOOSELEAF CLIP	4	3

### \*\* TEXWIPE

3158	TAPE HEAD CLEANING KIT DTC275	22	17
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Small details of design are important too. Unlocked, lids can be fully removed and nested under base to consume a minimum of space whether on desk or in trolleys. Dividers may be removed or snap-locked into positions in base of boxes or trays. With dividers positioned, discs can be easily removed and replaced without concern for discs sliding down and becoming damaged from creasing. Pressure sensitive labels are supplied for divider identification, which can be seen through high transparency acrylic lids. Bases are fitted with rubber feet to minimize surface contact; and two keys are furnished with all locks. Quality of material and manufacture are as important as design for long term user satisfaction. All file boxes and trays are precision injection molded of anti-static ABS plastic, lids of high transparency acrylic plastic.



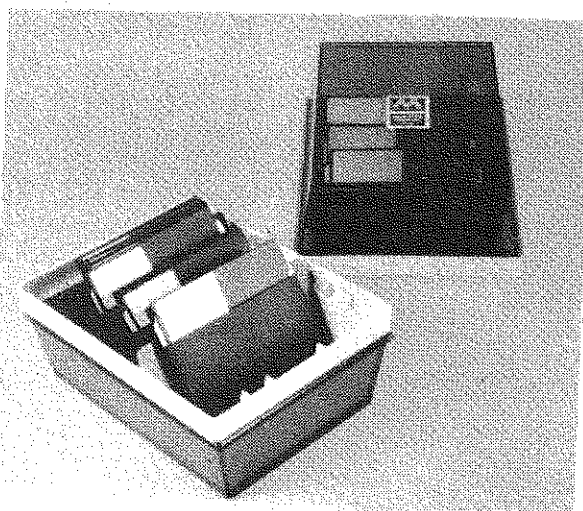
## DISK FILES

NMBR N ITEM

LIST AAA\$

### \*\* ADVANCE ACCESS GROUP

1043	FLEX-80 50+ 8" DISKS W/HANDLE	59	35
1042	MAXI-FLEX 50-100 8" DISKS	49	21
1041	MINI-FLEX 50-100 5" DISKS	39	14



NMBR N ITEM

LIST AAA\$

### \*\* AMARAY

1069	DISKBANK 5"	6	
1071	DISKBANK 5" BOX OF 20	91	
1070	DISKBANK 8"	8	

### \*\* INNOVATIVE CONCEPTS

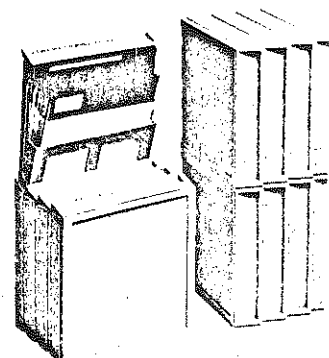
1867	CASSETTE 'N GAME FILE 18	30	22
1868	FLIP 'N FILE 10 5"-10 PAC	60	36
1869	FLIP 'N FILE 15 5"	10	7
1870	FLIP 'N FILE 25 5" W/LOCK	30	19
1864	FLIP 'N FILE 5"	30	19
1871	FLIP 'N FILE 50 5" W/LOCK	40	26
1865	FLIP 'N FILE 8"	35	23
1866	FLIP PAC 5"-10 PAC	50	36

### \*\* MEDIA PRODUCTS

2074	DISK MINDER 75 5" W/HANDLE	30	21
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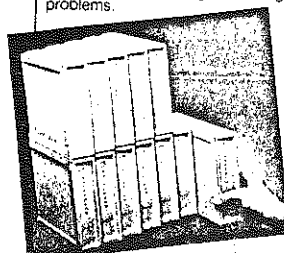
### \*\* NORWESCO

2269	VUCASE II 50 5" LATCH & HANDLE	30	23
2270	VUCASE II 50 5" LOCK & HANDLE	30	24



the DiskBank ...  
the best system ever  
designed for storing and  
filing

the Amaray Diskbank.  
It's the system that solves all  
floppy disk storage and filing  
problems.

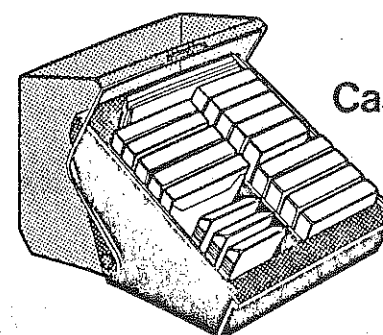


### DISKBANK FEATURES

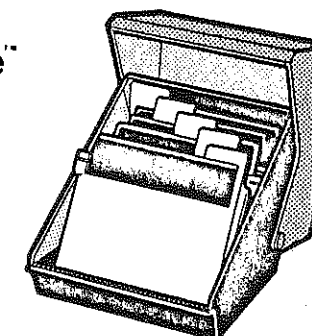
Interlocking Modular Design:  
Allows customers to build a systematic  
diskette library. Builds in a vertical or  
horizontal direction. It's always at their  
fingertips ... not lost in office space.

## DISK FILES

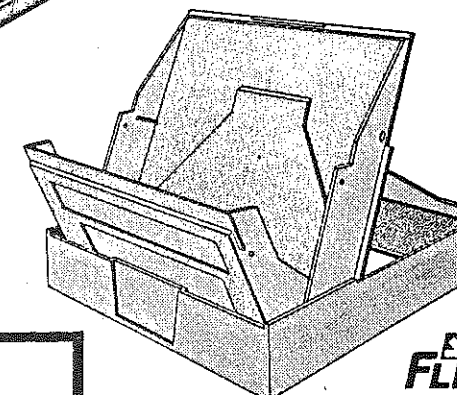
ICI Innovative Concepts Inc.



Cassette 'n Game File™



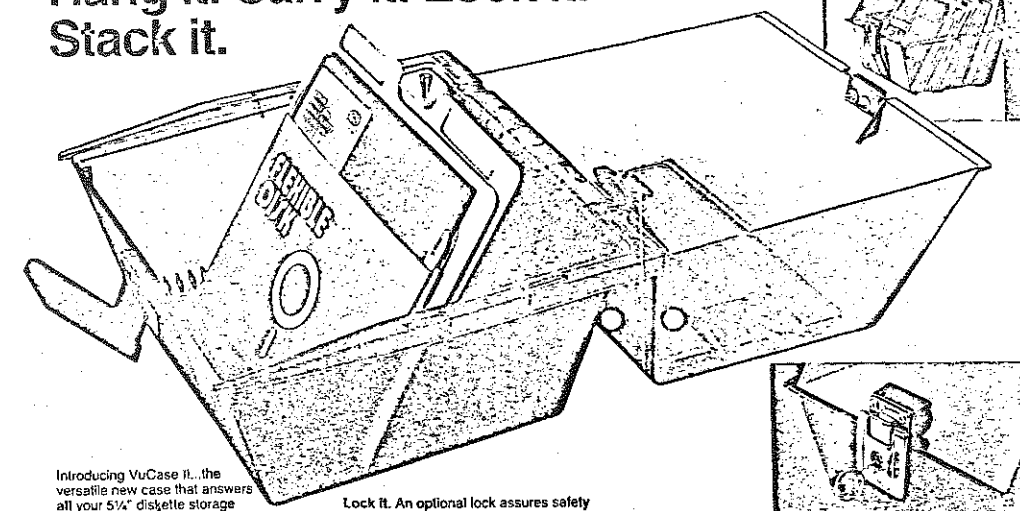
Flip 'n File™



FLIP PAC™

Assembly Language is  
better than a poke in  
the eye with a sharp  
stick.

Hang it. Carry it. Lock it.  
Stack it.

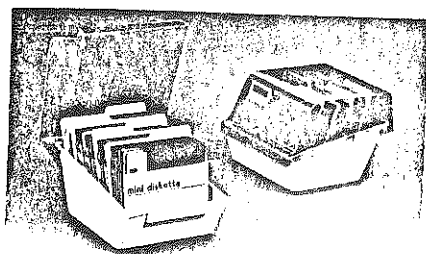


Introducing VuCase II... the  
versatile new case that answers  
all your 5 1/4" diskette storage  
needs. It incorporates the most wanted  
features into a moderately-priced, space-  
saving case. Nobody offers more.  
Hang it. The VuCase II comes complete  
with a patented wall mounting clip and  
screws. Or use the optional space-saving  
hanging bracket.  
Carry it. A unique, built-in handle makes  
transporting easy... around the office or  
around the world.

Lock it. An optional lock assures safety  
and security, especially important when  
traveling.  
Stack it. Interlocking ribs let you stack  
cases securely with no danger of tipping.  
Constructed of impact resistant Lexan®,  
the VuCase II is virtually unbreakable,  
stores and indexes up to 50 disks  
efficiently. The transparent case makes it  
easy to see the contents without opening  
the case; a unique hinge allows the cover

to be easily removed. Hang it. Carry it.  
Lock it. Stack it. You can't find a more  
versatile 5 1/4" storage case.

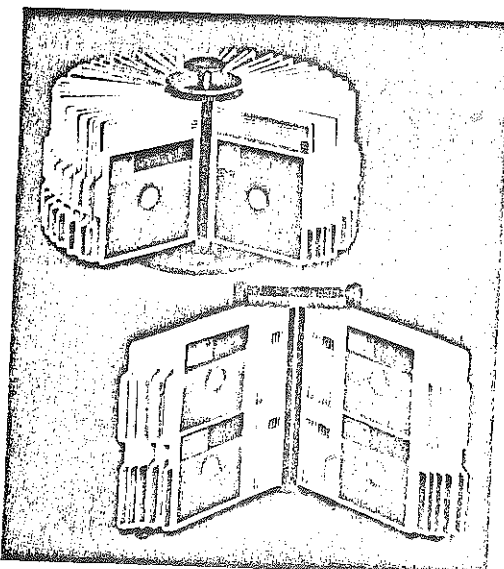
NORWESCO



## DISKETTE TRAYS

Diskettes are always protected with this new tray. A hinged smoke-tinted lid flips out of the way for easy access to diskettes — balanced so unit remains solidly on work surface. Units available for either 5 1/4" or 8" floppy diskettes and come complete with rigid plastic dividers to protect and organize file. Foam cushion bottom contacts diskettes at the corners to further protect read/write area. Attractive almond color complements any work station.

Diskette Tray for 8" floppy diskettes ..... DT050  
Mini Diskette Tray for 5 1/4" floppy diskettes .... MDT050



## Q. DISKETTE INDEX SYSTEMS

Protective organization for media in either Desk Stand or Rotary format. Anti-static formula, double-sided panels accommodate floppy diskettes and index cards for a maximum media file. Panels for 8" floppy disks hold two each with indexes. Panels for 5 1/4" mini diskettes hold four each with indexes. Special injection molded Desk Stand holds twenty of either panel (ordered separately) while the Rotary Stand holds 75 (also ordered separately). All diskettes are held in an upright and flat position with full visibility of titling information.

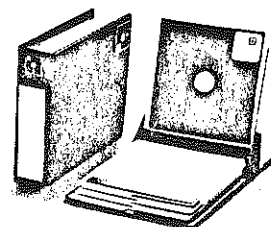
Diskette Index Panel (holds 2 each) ..... DP1102  
Mini Diskette Index Panel (holds 4 each) ..... MDP1104  
Desk Stand (holds 20 panels) ..... CDS20  
Rotary Stand (holds 75 panels) ..... CRS75

NUMBER ITEM

LIST AAA#

## \*\* RING KING VISIBLES

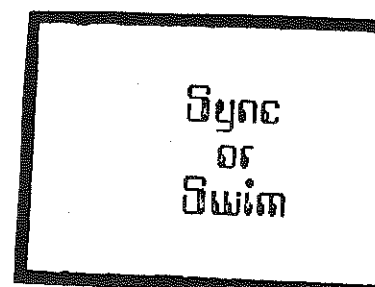
2678	DESK FILE 30-5" MDF30	50	33
2676	DESK FILE 30-8" DF30	60	40
2679	DESK FILE 50-5" MDF50	66	44
2677	DESK FILE 50-8" DF50	80	53
2684	DESK INDEX 20-5" MDI20	42	28
2682	DESK INDEX 20-8" DI20	50	33
2685	DESK INDEX 30-5" MDI30	50	33
2683	DESK INDEX 30-8" DI30	60	40
2670	DISK FILE TRAY 140-5" MDT140	44	29
2690	DISK FILE TRAY 70-5" LOCK MDT070	25	17
2669	DISK FILE TRAY 80-5" MDT080R	32	22
2668	DISK FILE TRAY 80-8" DT080R	40	27
2667	DISK TRAY 50-5" MDT050	27	18
2666	DISK TRAY 50-8" DT050	36	24
2672	DISK TRAY CABINET FOR 3 DT080R	210	135
2673	DISK TRAY CABINET FOR 8 MDT080R	230	147
2692	FLIP FILE 20-5" COLORS PCMDB20	22	15
2681	FLIP FILE 20-5" MDB20	37	25
2691	FLIP FILE 20-8" COLORS PCDB20	30	20
2680	FLIP FILE 20-8" DB20	43	29
2675	ROTARY STAND 150-5" MDR150	266	170
2674	ROTARY STAND 150-8" DR150	300	192
2687	SUSP FILE LGL 1-8" DSF011 25 PAC	74	49
2689	SUSP FILE LGL 2-5" MDSF021 25PAC	81	53
2686	SUSP FILE LTR 1-8" DSF01 25 PAC	65	43
2688	SUSP FILE LTR 2-5" MDSF02 25 PAC	70	47
2671	TROLLEY FOR 6 DT080R/8 MDT080R	130	84



## FLIP FILES

Black suede vinyl binder protects and displays 20 diskettes or mini diskettes. Closed, it files away on the shelf or in a drawer. Opened, it provides fingertip selection of media. Diskettes are protected within non-glare, anti-static formula vinyl files that display full title information. Comes complete with colored labels for coding.

Diskette Flip File ..... DB20  
Mini Diskette Flip File ..... MDB20

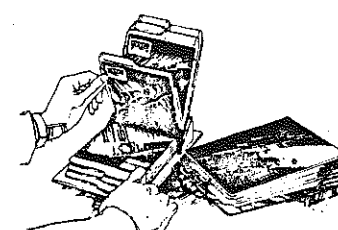


D

iskettes for your personal computer must have defense against dirt and grit, sharp objects, bending and all the other enemies of magnetic media. Otherwise, valuable information could be damaged.

The Ring King Data Defenders for diskettes offer all the protection your diskettes need...and more. The PC line offers economy, durability and maximum storage in a minimum of space.

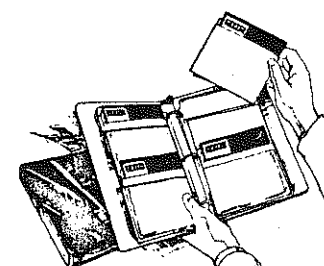
Every diskette you place in a Ring King PC Data Defender will be protected within anti-static formula vinyl files that display full title information. And all are available in rainbow colors: white, red, yellow and blue.



## RING KING PC FLIP FILES

This PC Data Defender bends over backwards to make your information retrieval easy. Closed, the Flip File is a vinyl binder that protects and stores 20 diskettes. You can easily file the binder on a shelf or in a drawer. Open, the cover bends back and out of the way for indexed fingertip selection of media.

PC 8" Diskette Flip File ..... PC-DB20  
PC Mini Diskette Flip File ..... PC-MDB20



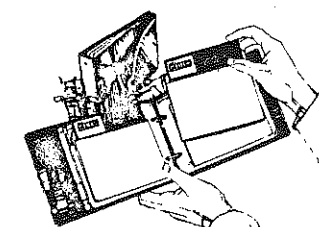
## RING KING PC BINDER FILES

Store 20 diskettes in a minimum of shelf space. The Binder Files contain 5 pages, each holding 4 mini diskettes.

## RING KING PROTECTION FOR YOUR DISKETTES

Available in two sizes: regular size binder that also holds 8 1/2" x 11" documents, or mini size common to most PC software manuals. Choose the size and format that matches your work space. All looseleaf files within the binder are of non-glare, anti-static formula vinyl.

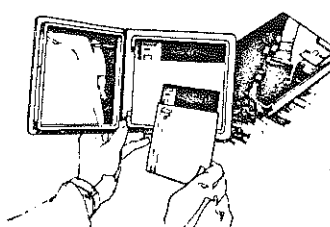
PC 8 1/2" x 11" Binder File ..... PC-LB20  
PC 6" x 9" Binder File ..... PC-MLB20



## RING KING PC WALLET

Here's a lot of storage at an economical price. Your mini diskettes are kept dust-free and flat in a strong Ring King 55-point "POLYFAST" plastic binder. Store 10 mini diskettes in its five anti-static formula pages. Close the Wallet and it tucks away in a minimum of storage space. Full title information can be quickly seen on each diskette.

PC Mini Diskette Wallet ..... PC-MDW10



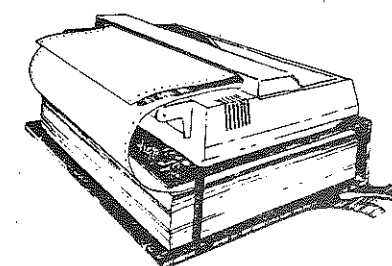
## RING KING PC CARRIER CASE

Available in two sizes, this rigid vinyl case safely holds 3 or 6 mini diskettes. It can be used as an extra protective covering when mailing or transporting diskettes. Ideal to keep specific diskettes separate like payroll, taxes, inventory. Also perfect for schools and libraries; wherever diskettes are handled.

PC Carrier for 3 mini diskettes ..... PC-MDC3  
PC Carrier for 6 mini diskettes ..... PC-MDC6

## DON'T FORGET YOUR DISKETTE PROTECTION

Protection for your magnetic media is just as important as the information each diskette holds. Depend on the Ring King PC Data Defenders to keep your information safe, protected and ready for retrieval.



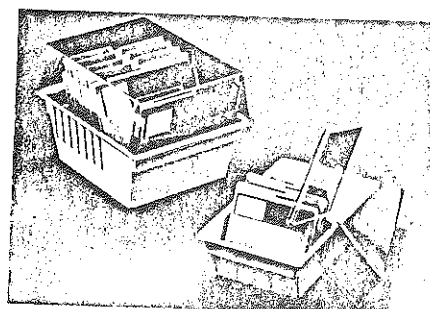
## RING KING PRINTER STAND

In addition to diskette protection, Ring King manufactures a complete line of furniture for the personal computer. Made from durable plexiglass, the Ring King desktop printer stand is designed specifically to save space. The stand raises the printer to accommodate continuous forms. Soft "feet" dampen printer movement and protect your work surface. Rich bronze color complements your computer's appearance as well as your work area. Stand is 18" wide, 12 1/2" deep, and 5" high.

PC Printer Stand ..... PC-PS1216

Look for the full line of Ring King computer support products where you buy your computer supplies. If they don't have Ring King products in stock, or if you want to find the location of your nearest dealer, contact Ring King Visibles, Inc., 215 W. 2nd St., Muscatine, Iowa 52761. (319) 263-8144. Toll Free (800) 553-9647.

## LEADERS IN COMPUTER SUPPORT



## DISKETTE FILE TRAYS

Versatile high-impact trays protect up to 80 full size (8") or mini (5 1/4") diskettes. Attractive almond color complements any work station. Smoke tinted protective cover provides a closed defense from surrounding environment. Movable follower block and foam cushion in tray bottom keep media upright and flat. Trays come complete with 8 rigid plastic dividers to organize and protect media.

Our Diskette File Trays are specially designed to hang in standard size file drawers for security, convenience and protection. Can be "ganged" side by side for large capacity in a single drawer.

Diskette File Tray for 8" diskettes ..... DT080R  
Mini Diskette File Tray for 5 1/4" diskettes .... MDT080R

## DISK FILES

NMBR N ITEM

LIST AAA\$

### \*\* SOUTHWESTERN DATA SYSTEMS

2926 EXECUTIVE CASE 5" 25 24

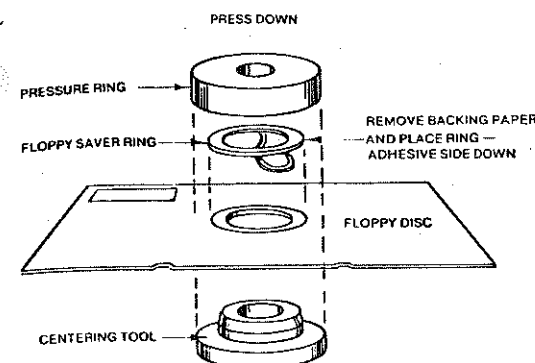
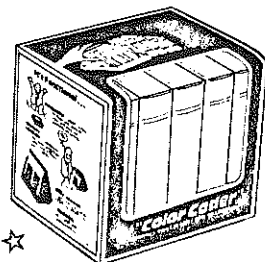
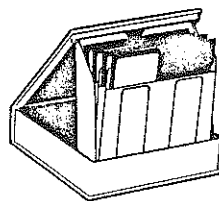
### \*\* SRW COMPUTER COMPONENTS

2933 KAS-ETTE 5" ASSTD COLORS 5 PAC 25 14 ☆  
2930 KAS-ETTE 5" BEIGE 10 PAC 48 20  
2932 KAS-ETTE 5" BLUE 10 PAC 50 24  
2931 KAS-ETTE 5" RED 10 PAC 50 24  
2934 KAS-ETTE 8" BLK/BGE/GRY 10 PAC 59 26

### \*\* STOR WARES

> SPECIFY BLACK OR WALNUT  
3011 FIBERBOARD FILE 150+ 5" DISKS 15 13  
3010 FIBERBOARD FILE 75+ 5" DISKS 10 9  
3012 FIBERBOARD FILE DIVIDERS/LABELS 3 3

## SRW "Color Coder"!



mini  
**Floppy Saver**  
D/C

MADE IN U.S.A. BY TRI-STAR CORP., CO 81502

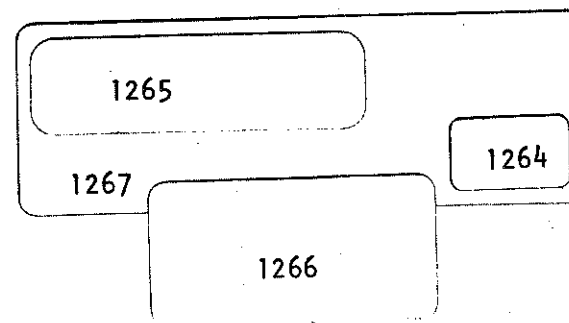
#### FLOPPY SAVER PREVENTS:

Computer drive's clamping hub from tearing disk's center hole.  
Coating removal, scuffing and dumping when the disk hits the rotating spindle.  
Data loss caused by improper rotation of a floppy disk.  
Any damage to Floppy Disk's center hole.

#### FLOPPY SAVER KIT consists of:

Plastic centering tool and pressure ring.  
25 7-mil mylar rings with paper protected adhesive backing.

EASILY installed on disks in seconds. Only one side needs the ring.



**The spray  
that keeps  
static away.**

EVANS Anti-Static Spray is safe on any material.

**The cloth  
that keeps  
static off.**

EVANS Statiklee™ Cloth is ideal for many special needs.

Whether it's man-made or natural, Anti-Static Spray is perfectly safe for any material. It's non-flammable, and dries clear... will not stain or discolor. Even reduces wear and works as a soil retardant/deodorizer.

Ideal for home, office or factory: countertops, dry cleaning and laundry, clothing, socks, plastics, acrylics, fiberglass, electronic business machines, ventilation blinds, light fixtures, sensitive meters and indicators, paper handling machines, data processing and computer equipment, industrial plants and more.

To apply, just spray directly on surface where static electricity collects. Anti-Static dries in moments and will last until washed off or worn away under heavy contact.

Static electricity can shock, attract dust and dirt, even cause materials and equipment to stick together. EVANS Anti-Static Spray eliminates these problems.

Now only \$3.95 per bottle, catalog no. EAS 16.  
Also available in one gallon containers at \$23.95 each, catalog no. EAS 128.

From home or office computer CRT screens to television screens and records, a single wipe of the Statiklee Cloth removes static and dust build-up. And on these as well as other selected surfaces, the dry cloth means no potential for liquid streaking or residue film.

On a CRT or television screen, static electricity can collect dust obscuring vision... or the static can even cause video interference. With records, or other surfaces around electronic equipment, static electricity can constantly be polluting the environment by creating a build-up of dust and dirt. And with a home computer, it's vital to keep all cabinet surfaces and working areas clean.

Now, used at least once a day, the Statiklee Cloth will help insure the cleaner environment you need.

Impregnated with a special chemical treatment, and made of double napped, 100% cotton flannel fabric, the 12" x 12" Statiklee Cloth will retain chemical potency for 4 to 6 months. (Kept in its Secure-Seal pouch and shaken briskly at least once a week.)

Most important, it's dry, safe and easy to use. Will not scratch or damage any surface.  
The Statiklee Anti-Static Cloth is available now for only \$2.95, catalog no. STAT-1212.

## DISK LABELS

NMBR N ITEM

LIST AAA\$

### \*\* AVERY

> REMOVABLE WHITE LABELS  
1267 LABEL 1 X 3 S1648 250/BX 5 4  
1268 LABEL 1-3/4 X 4-3/4 S5253 100/BX 3 3  
1265 LABEL 1/2 X 1-3/4 S828 840/BX 5 4  
1266 LABEL 3/4 X 1-1/2 S1224 500/BX 4 3  
1264 LABEL 3/8 X 5/8 S610 1000/BX 4 3

## HUB RINGS

### \*\* TRI-STAR

3229 HUB RING KIT 5" W/25 RINGS 15 7  
3230 HUB RING KIT 8" W/25 RINGS 17 8  
3231 HUB RING REFILL 5"-50 RINGS 8 5  
3232 HUB RING REFILL 8"-50 RINGS 9 6

## DISK DRIVE DUST COVERS

### \*\* COVER CRAFT

> CLEAR PLASTIC  
1534 NEC 8031A MINIDISK 9 8  
1510 ONE 5" DISK DRIVE 9 8  
1511 TWO 5" DRIVES-STACKED 9 8

### \*\* SOUTH COAST ENTERPRISES

> TAN PLASTIC  
2884 DISK DRIVE 6 6  
2885 TWO DISK DRIVES STACKED 8 8

## CLEANING KITS

### \*\* EVANS

1746 ANTI STATIC CLOTH 3 3  
1745 ANTI STATIC SPRAY 1 QT 4 4

### \*\* INNOVATIVE COMPUTER PRODUCTS

1861 ANTI STATIC KIT 7 7



## CLEANING KITS

NMBR N ITEM LIST AAA\$

### \*\* HEAD

1833 DRIVE HEAD CLEANING KIT 5" 25 15

### \*\* INNOVATIVE COMPUTER PRODUCTS

1862 HEAD CLEANING KIT 5" PERFECTDATA 30 19  
1858 HEAD CLEANING KIT 8" PERFECTDATA 30 19  
1863 MICRO MAINTENANCE KIT 5" 40 27  
1859 MICRO MAINTENANCE KIT 8" 40 27

### \*\* SCOTCH 3M

2812 HEAD CLEANING KIT 5" 30 24  
2813 HEAD CLEANING KIT 8" 30 24

### \*\* TEXWIPE

3160 COMPUTER ROOM CLEAN KIT DTC294 34 27  
3163 DISK HEAD CLEAN KIT 5" DTC266 13 11  
3164 DISK HEAD CLEAN KIT 8" DTC267 13 11  
3161 MICRO CLEANING KIT 5" DTC288 37 30  
3162 MICRO CLEANING KIT 8" DTC289A 37 30

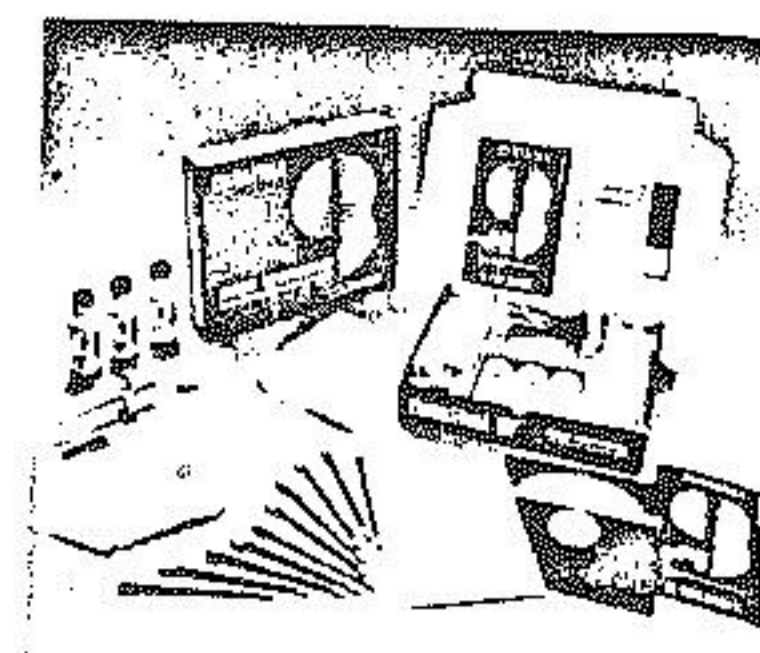
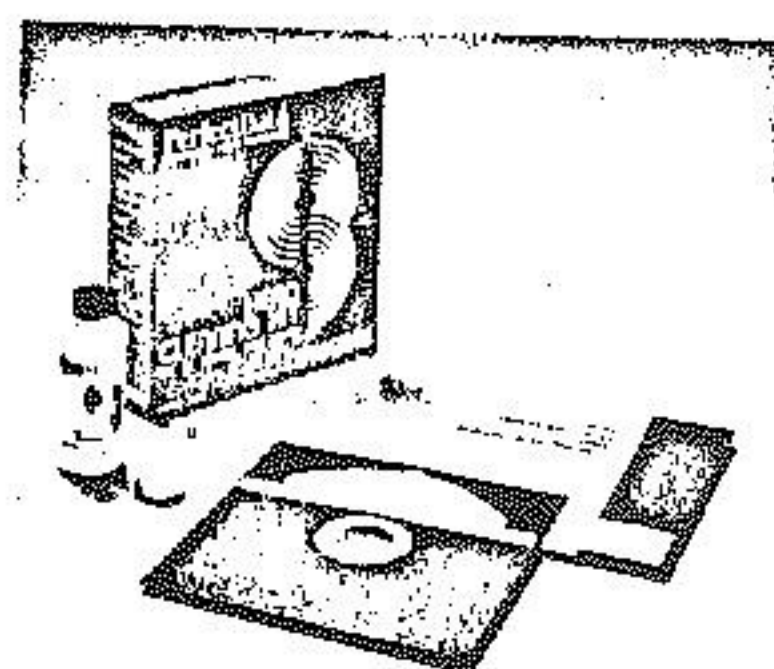
### \*\* VERBATIM

3248 HEAD CLEANING KIT 5" 13 8  
3250 HEAD CLEANING KIT 5" REFILL PAC 20 15  
3249 HEAD CLEANING KIT 8" 13 8  
3251 HEAD CLEANING KIT 8" REFILL PAC 20 15

### PERFECTDATA HEAD CLEANING KIT

The PerfectData Head Cleaning Kit removes contamination from recording heads of 8" or 5 1/4" flexible disk drives. It safely cleans single or double sided drives without field engineering assistance, and it's simple. Dispense a special cleaning solution onto the lint-free cleaning disk through the cutout in the diskette jacket. Insert the cleaning diskette and activate the drive. The cleaning solution quickly and safely loosens head contamination, and the non-abrasive disk gently buffs the head dry.

The PerfectData Head Cleaning Kit reduces computer downtime, reduces maintenance costs, and extends media and head life. Our patented wet/dry cleaning method is recommended by most leading flexible disk drive and computer manufacturers. Each kit provides cleaning capability for one drive for up to six months (26 cleanings).



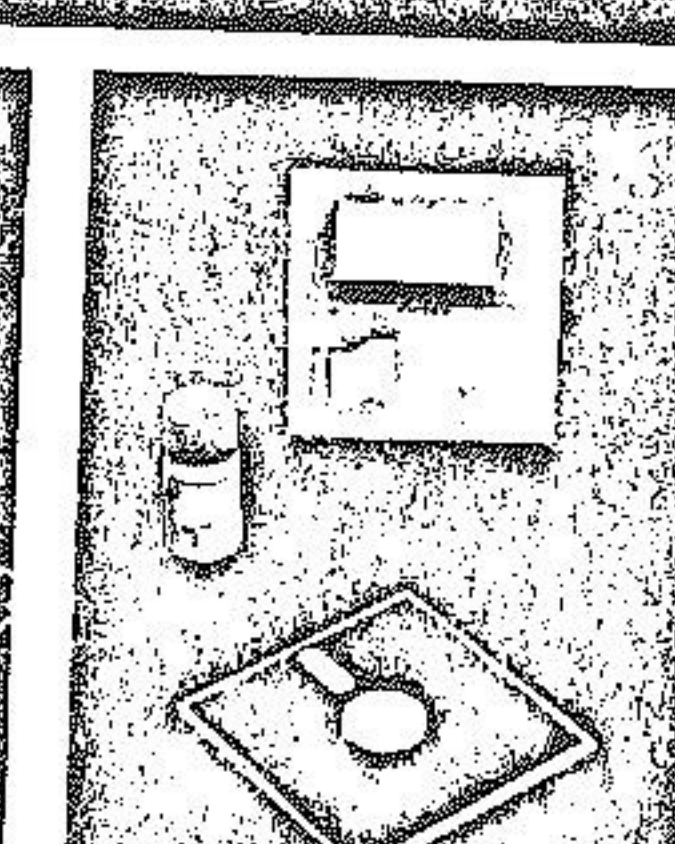
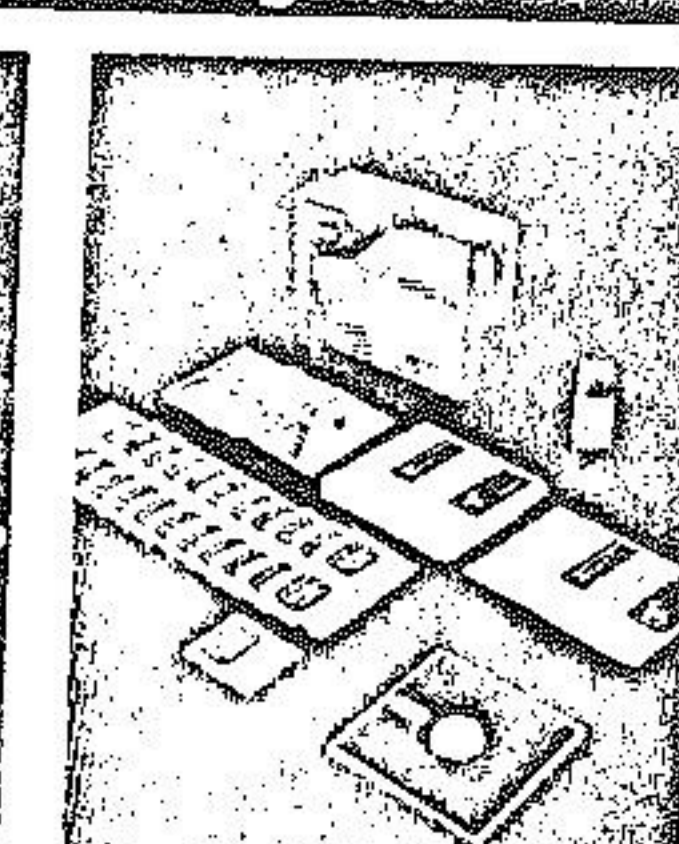
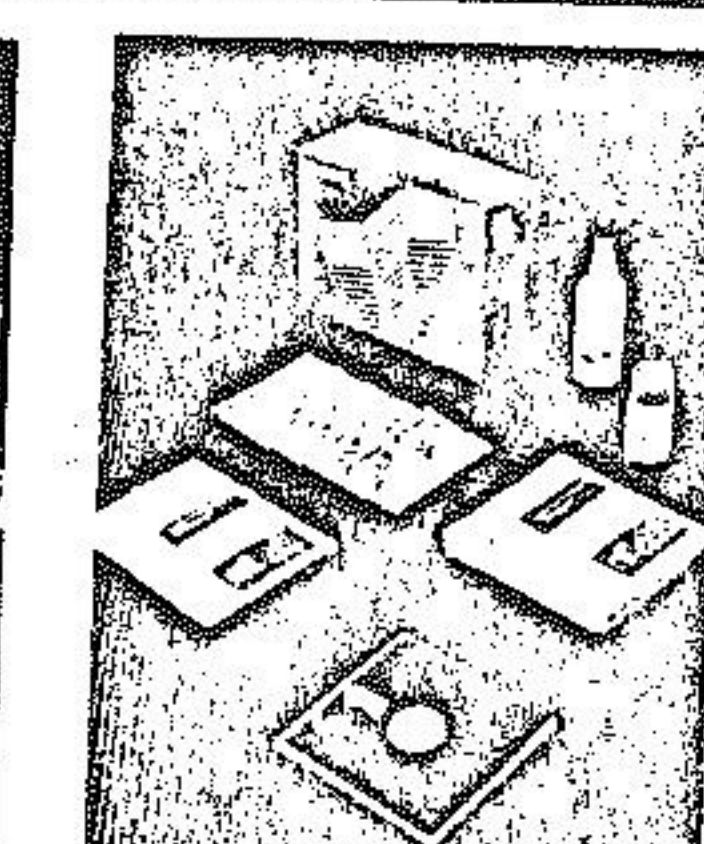
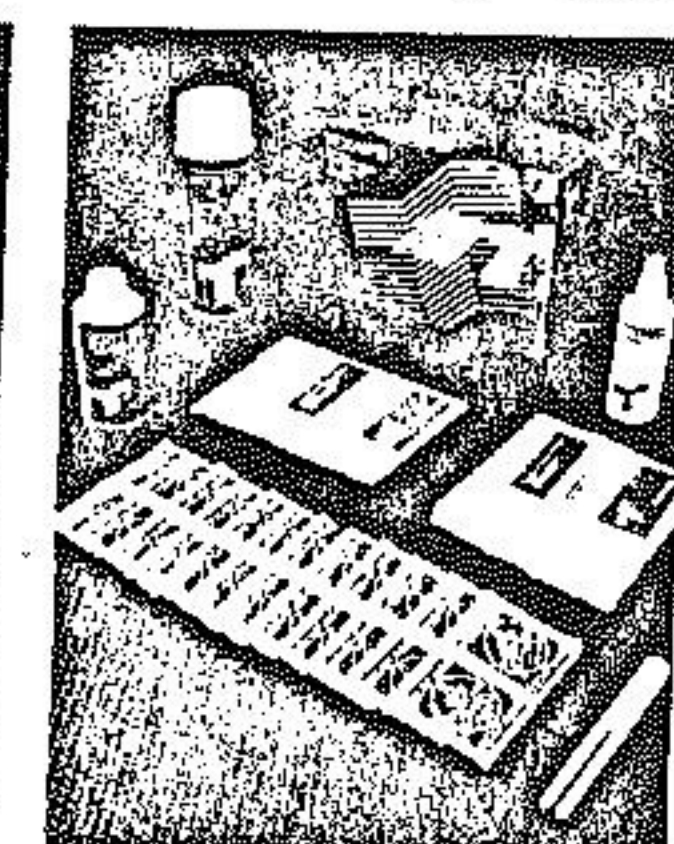
### PERFECTDATA MICRO MAINTENANCE KIT

The Micro Maintenance Kit provides the necessary cleaning supplies for the small business computer or personal computer. It is intended for periodic preventative maintenance and cleaning of flexible disk drives, tape drives, printers, CRT screens, and keyboards. The kit includes a flexible disk drive head cleaning diskette and special cleaning solution. It also includes CRT screen cleaner, cleaning wands, lint-free cloths, a brush, and anti-static spray to protect sensitive circuits from damage caused by static charge. An instruction booklet explains the use and benefits of each component and helps the user plan an effective preventative maintenance program.

### TEXWIPE



## Computer Room Kits Automated Office Cleaning Kits



### DTC295 Computer Printer Cleaning Kit

- 40 Ink-Off
- 10 Office Wipes
- 20 Alco-Pads
- 1 Bag Bluewipes
- 25 Gloves
- 1 Brush
- 1 TP-35 non-aerosol 9.5 oz.

The printer preventive maintenance kit DTC 295 from Texwipe gives your customer all the products, plus easy-to-follow instructions, for cleaning the printer and ensuring its maximum efficiency and print-out legibility. The cleaning of the printer of the computer is often ignored by the user and left to the repairmen (often when it's too late for preventive maintenance).

### DTC294 Computer Room Kit

- 1 CRT 4 oz. pump non-aerosol
- 50 Techni-Cloth Wipes 6"x6"
- 1 Static Neutralizing Cloth
- 1 Antistat spray aerosol 15 oz.
- 24 Texpads
- 1 Texwand
- 1 Head & Disc Cleaner non-aerosol 9.5 oz.

Texwipe's Computer Room Kit DTC 294 contains products for the 3 most important aspects of the computer room: The Environment (Antistat Spray); The Terminal (CRT Cleaner, Wipes, Static Neutralizing Cloth); and The Tape Transport (Solvent, Texpads & Wipes). Virtually all the products your customers will need to keep the environment and equipment clean and contamination free.

### DTC284\* (5 1/4" Disk) DTC284A\* (8" Disk) Microcomputer Cleaning Kit

- 1 Read/Right Floppy Disk Head Cleaner
- 1 Read/Right Metered Spray Head Cleaner aerosol 1 1/4 oz.
- 1 CRT pump non-aerosol 4 oz.
- 50 Techni-Cloth Wipes 6"x6"
- 1 Texstat non-aerosol 4 oz.
- 1 Static Neutralizing Cloth
- 10 Office Wipes

\*Includes pump spray antistat CRT cleaner.

\*\*Includes pressaturated pad CRT cleaner.

### DTC288\*\* (5 1/4" Disk) DTC288A\*\* (8" Disk) Microcomputer Cleaning Kit

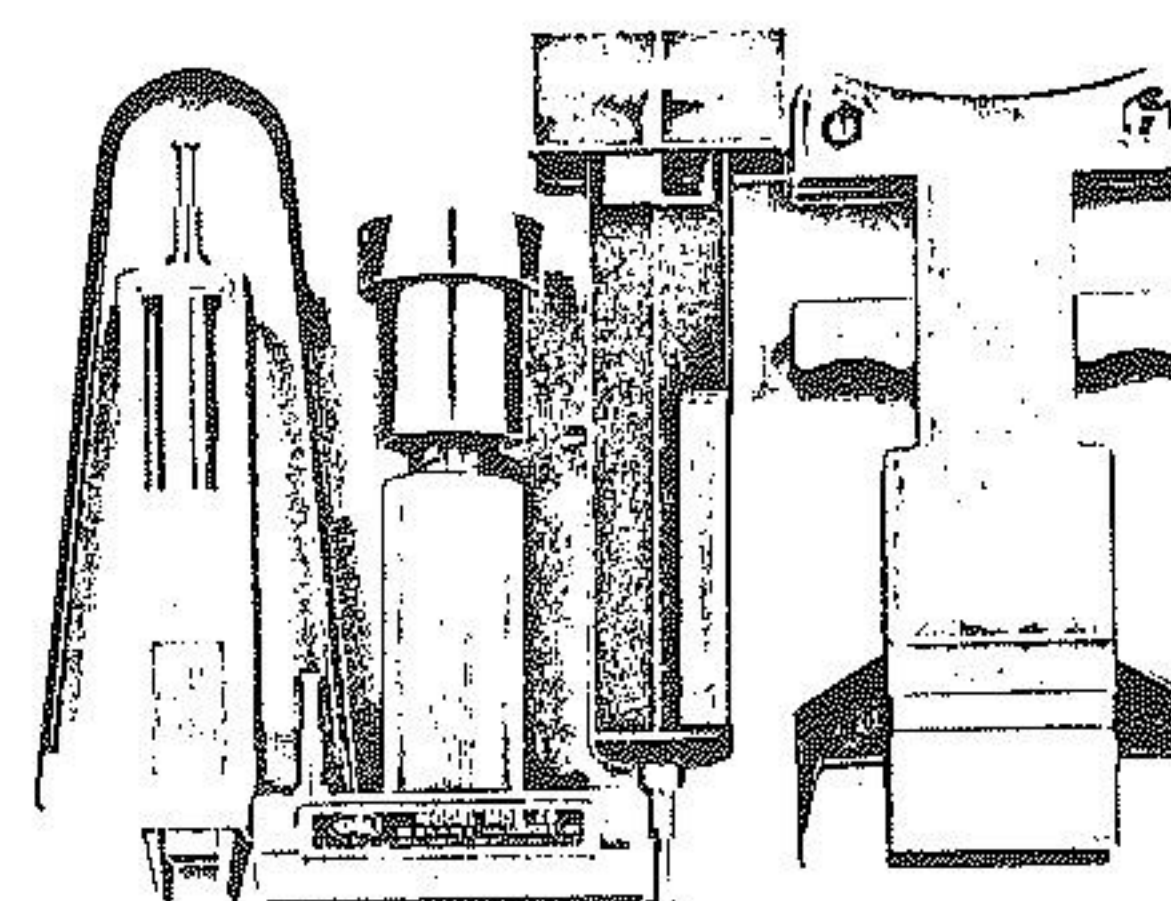
- 1 Read/Right Floppy Disk Head Cleaner
- 1 Read/Right Metered Spray Head Cleaner aerosol 1 1/4 oz.
- 24 Clearview Terminal Wipes
- 30 Techni-Cloth Wipes 6"x6"
- 1 Texstat non-aerosol 4 oz.
- 1 Static Neutralizing Cloth
- 10 Office Wipes

### DTC266 (5 1/4" Disk) DTC267 (8" Disk) Read/Right Floppy Disk Head Cleaning Kit

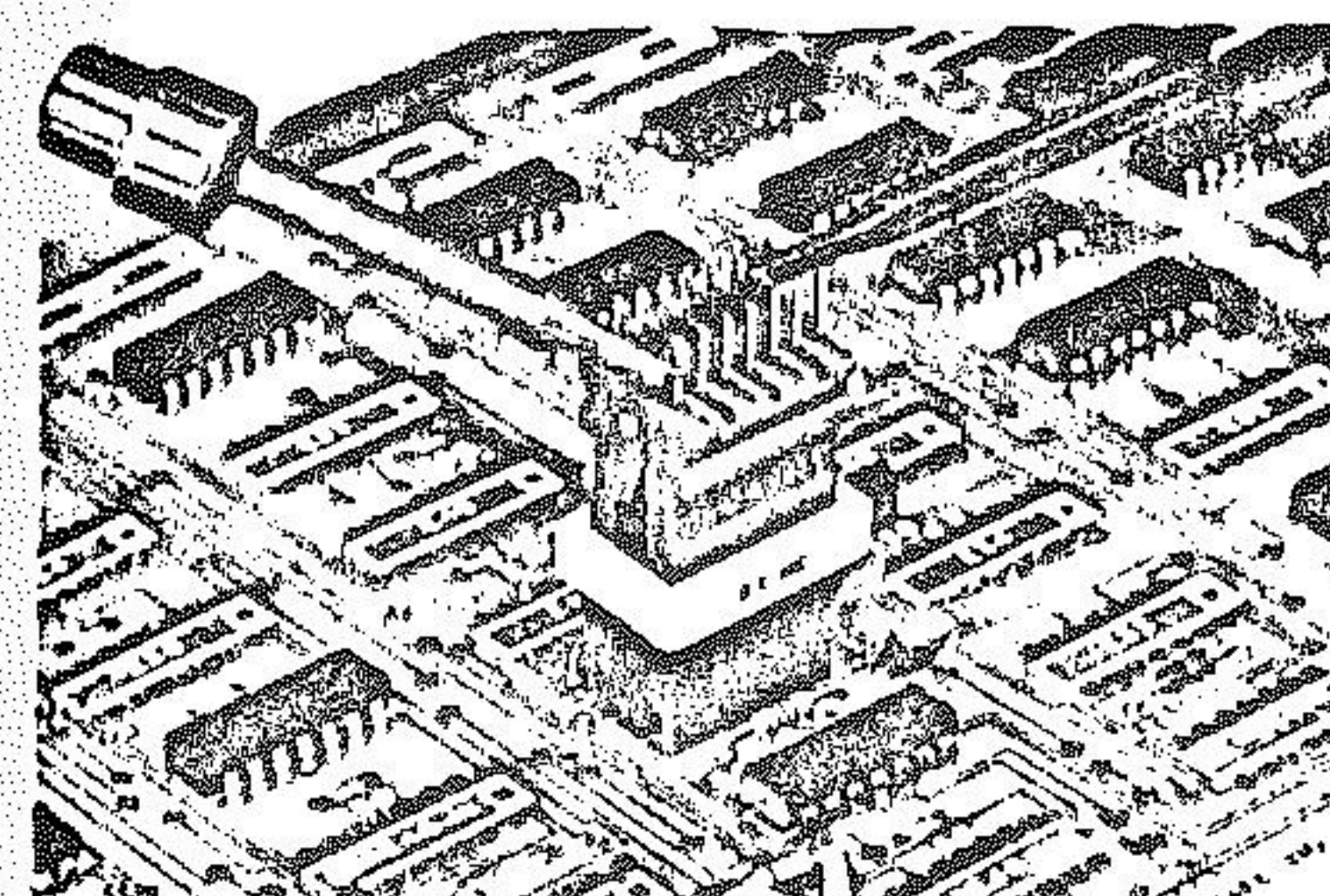
- 1 Read/Right Floppy Disk Head Cleaner
- 1 Read/Right Metered Spray Head Cleaner aerosol 1 1/4 oz.

There are two main types of contaminants that can affect the performance of a floppy disk read/write head—airborne contaminants and oxide build-up. The Read/Right Floppy Disk Head Cleaner allows for easy cleaning of the inaccessible head without taking apart the mechanism. The cleaning solution used in conjunction with the disk features a metered spray valve enabling the user to apply a precise pre-measured amount of cleaning solvent to the head cleaning disk.

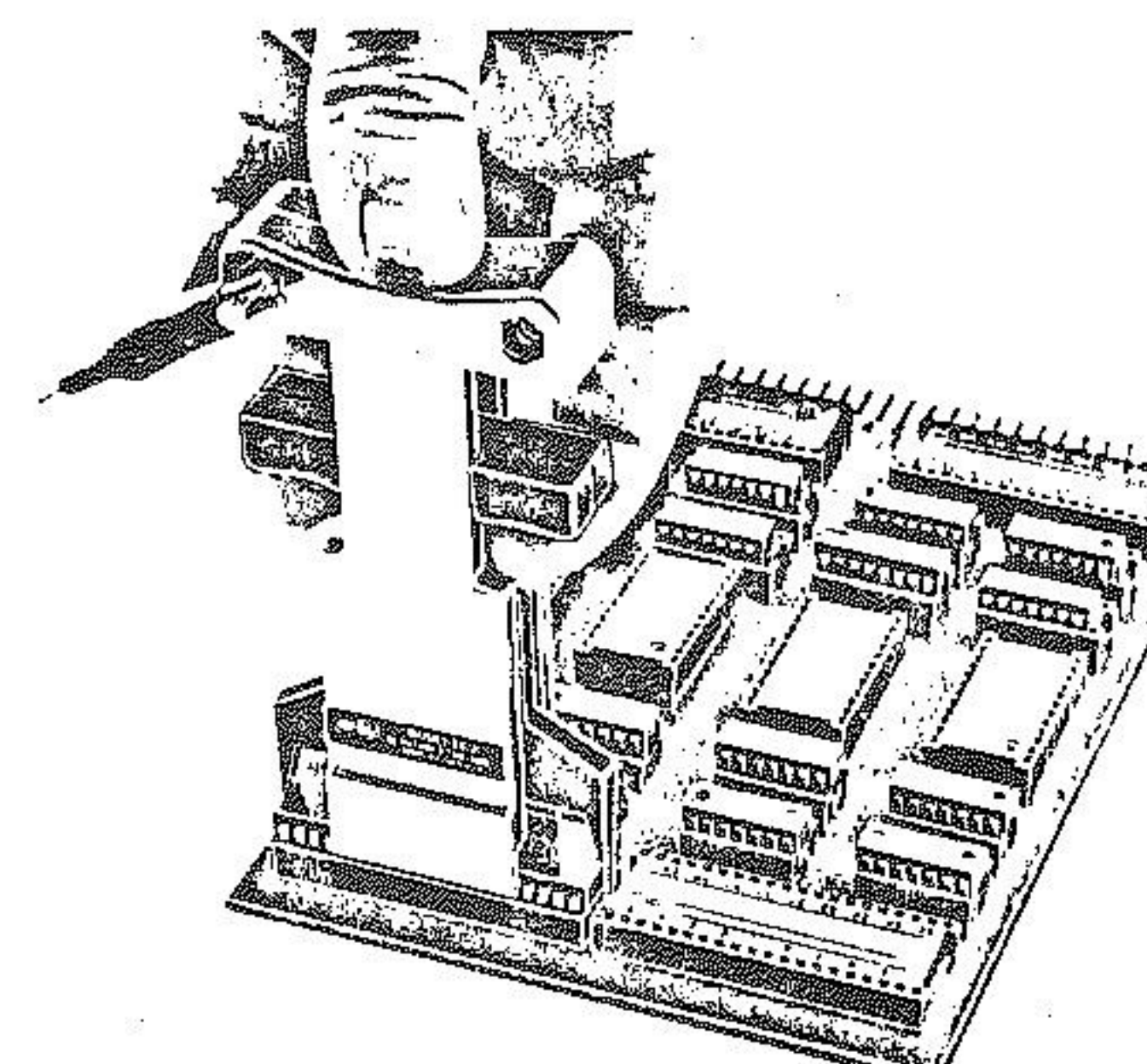
## WK-7 IC INSERTION KIT



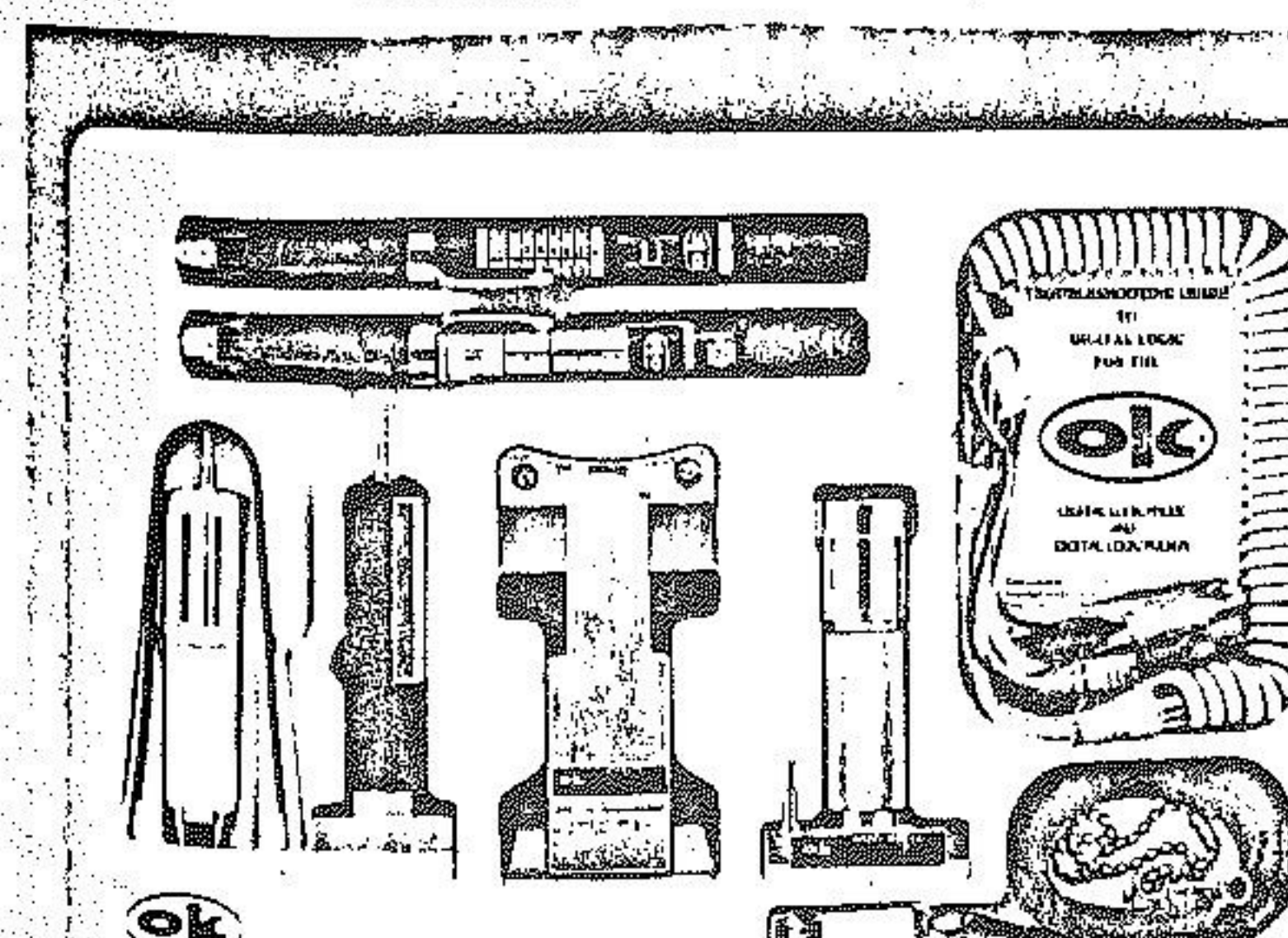
### CHIP-CLIP



### EX-2 EXTRACTION TOOL



### WK-8 CIRCUIT TROUBLE SHOOTING KIT



## CHIPS & TOOLS

NMBR N ITEM LIST AAA\$

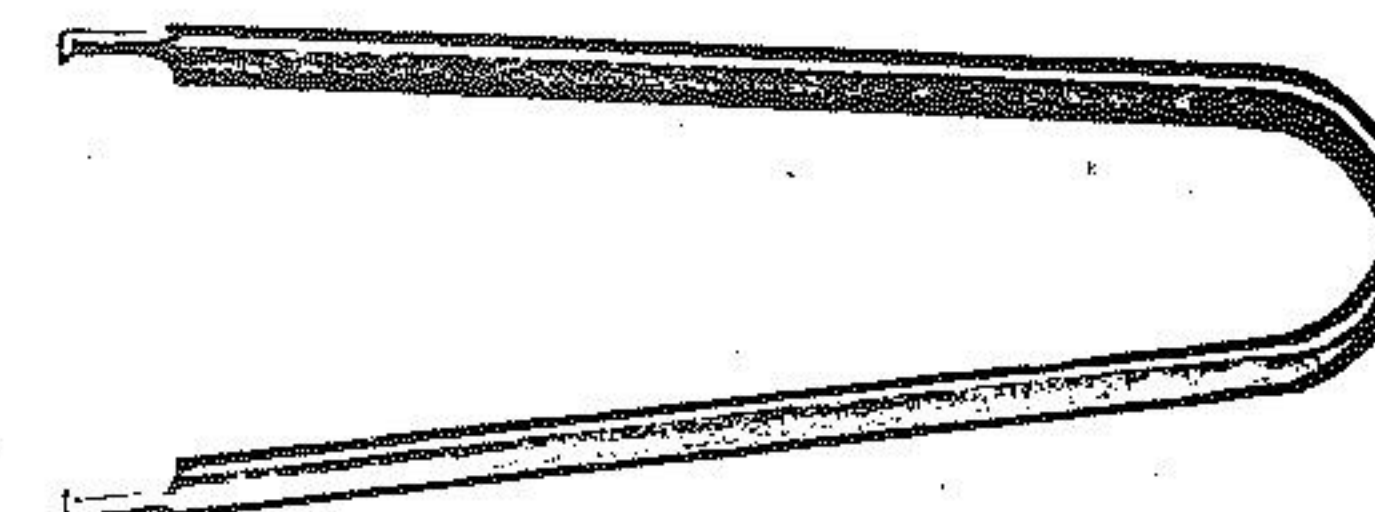
### \*\* CALIFORNIA COMPUTER SYSTEMS

1327 RAM FOR ROM RPLMT 7001A 20 19  
1328 UNBURNED ROM 7601A 20 19

### \*\* OK INDUSTRIES

2313 CHIP CLIP CC14 7 6  
2314 CHIP CLIP CC16 7 6  
2315 CHIP CLIP CC24-28 17 16  
2316 CHIP CLIP CC36-40 25 24  
2317 CHIP CLIP CC64 38 35  
2312 CHIP CLIP CC8 8 7  
2308 EXTRACTION TOOL EX1 3 2  
2309 EXTRACTION TOOL EX2 11 10  
2310 INSERTION/EXTRACTION KIT WK7 38 35  
2318 SET OF 6 CHIP CLIPS 101 89  
2311 TROUBLESHOOTING KIT WK8 151 136

## DIP/IC EXTRACTOR TOOL



### \*\* ADEL TOOL

- > NIBBLE A MATCHING SQUARE
- > NOTCH & USE BOTH DISK SIDES!

1040 NIBBLING TOOL 10 8

### CUTS

Holes - Any Shape any Size over 7/16"

### NOTCHES

Clearance For Plugs - Wiring

### TRIMS

Undersized Holes To Fit Parts

### CAPACITY

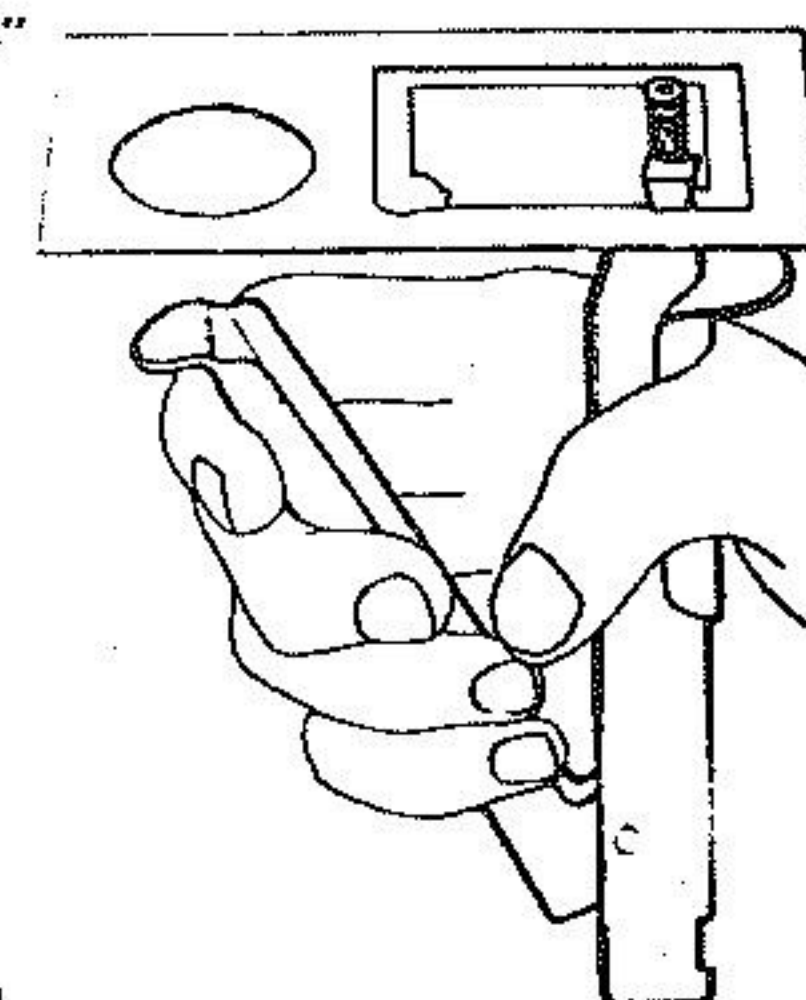
Steel - 18 Gauge (.0475")  
Aluminum - 16 Gauge (.0625")  
Plastic and Copper

### IT'S EASY TO USE

Start with a 7/16" Hole Then Cut to Size and Shape Required. Replacement Punch Available.

### IDEAL FOR:

Installing CB Radios, Home Air Conditioning Units, Humidifiers, Vinyl Tile, Automobile Body Work, Air and Heating Duct Work, Model Aircraft and Railroad Hobbyists, any Sheet Metal or Plastic Work, Aluminum Siding, Plus many other u.





# DISK DRIVES

NMBR N ITEM

LIST AAA\*

## \*\* AMDEK

1088	AMDISK 3" DISK DRIVE	299	273
1093	AMDISK III 3" DUAL DRIVES	799	722
1091	AMDISK SS DD DISKS...10 PAC	70	68

## \*\* APPLE COMPUTER

1142	DISK II 5" SS SD DRIVE	525	369
1143	DISK II W/CONTROLLER	645	419

## \*\* CORONA DATA SYSTEMS

1458	HARD DISK SYSTEM 10MB STARFIRE	2695	
1457	HARD DISK SYSTEM 5MB STARFIRE	2195	

## \*\* CORVUS SYSTEMS

1487	CONSTELLATION DISK CS/AP	100	94
1483	CORVUS 06MB HARD DRIVE SYSTEM	2495	2137
1484	CORVUS 11MB HARD DRIVE SYSTEM	3495	3002
1485	CORVUS 20MB HARD DRIVE SYSTEM	4495	3816
1472	DISK INTERFACE KIT D/AP	300	192
1477	DISK SERVER DS/AP	900	866
1486	FLEX ANTI GLARE SCREEN WSB/S	35	35
1470	HOST MULTIPLEXER AP-C/HM	900	787
1471	MASTER MULTIPLEXER AP-C/MM	900	787
1474	MULTIPLEXER 15' CABLE CC/15	80	57
1475	MULTIPLEXER 30' CABLE CC/30	80	74
1473	MULTIPLEXER 5' CABLE CC/05	40	37
1476	MULTIPLEXER 50' CABLE CC/50	100	94
1479	OMNINET APPLESHARE DISK AP/5N	1490	1274
1488	OMNINET DISK SERVER DS/AP	990	866
1489	OMNINET TRANSPORT PAC	1895	1601
1478	OMNINET TRANSPORTER OM/A2	495	444
1480	OMNINET TRUNK CABLE 1000'	250	231
1481	TAP BOXES-4 & 2 TERMINATORS	39	37
1482	UPGRADE DISK AP/CPM	100	94

## \*\* DA COMPUTER PRODUCTS/CBE

1551	DIAGNOSTIC CONTROLLER	125	97
1549	DISK DRIVE 5" SS SD 35T	325	244
1550	HALFHEIGHT 5" SS SD 40T	349	263

## \*\* DANA INDUSTRIES

1556	DISK CONTROLLER CARD	95	78
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## \*\* DAVONG

1584	MULTI-LINK NETWORK (DEVELOPMENT)		
1581	UNIVERSAL EXT 05MB HARD DRIVE	1995	1781
1582	UNIVERSAL EXT 10MB HARD DRIVE	2395	2138
1583	UNIVERSAL EXT 15MB HARD DRIVE	2795	2466

## \*\* FOURTH DIMENSION SYSTEMS

1791	SUPER 5" SS SD 35T DRIVE	399	229
1792	SUPER W/CONTROLLER	419	268

## \*\* LAZER MICRO-SYSTEMS

1997	SLIMLINE 5" SS SD 35/40T TEAC		
1999	SLIMLINE CONTROLLER		
1998	TWO SLIMLINE IN CABINET		

## \*\* LOBO SYSTEMS INTERNATIONAL

3408	LOBO 1850A & 8" DS DD FLOPPY	3459	
3407	LOBO 1850A 8" HARD DISK SYSTEM	3059	
2037	LOBO 3101 5" SS SD 35T DRIVE	385	
2038	LOBO 3101-I & CONTROLLER CARD	455	
3403	LOBO 5101CA 8" DS DD & CARD	1625	
3404	LOBO 5102CA TWO 8" DS DD	1925	
3410	LOBO 8" CP/M DISK	54	
3409	LOBO 8" PASCAL CREATOR DISK	54	
3401	LOBO 8101CA 8" SS DD & CARD	1325	
3402	LOBO 8202CA TWO 8" SS DD	1625	
3406	LOBO 950A & 5" DS DD FLOPPY	2675	
3405	LOBO 950A 5" HARD DISK SYSTEM	2375	

## \*\* MA SYSTEMS

3448	FD35 OMNI SS SD 5" DRIVE	242	
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## \*\* MICRO-SCI/STANDUN CONTROLS

2096	A2 5" SS SD 35T DRIVE	345	268
2103	A2 CONTROLLER CARD	100	84
2097	A2 W/CONTROLLER	445	346
2098	A40 5" SS SD 40T DRIVE	379	308
2099	A40 W/CONTROLLER	479	388
2102	A40/A70 CONTROLLER CARD	100	84
2100	A70 5" SS DD 70T DRIVE	529	375
2101	A70 W/CONTROLLER	629	475
2104	FILER	20	14

## \*\* MITSUBA/EI-EN ENTERPRISES

2142	SUPER 5T40 5" SS SD SLIM	294	
2144	SUPER 5T40 CONTROLLER	66	
2143	SUPER 5T80 5" DS SD SLIM	413	
2145	SUPER 5T80 CONTROLLER	72	

## \*\* MOUNTAIN COMPUTER

2175	HARD DISK 05MB SYSTEM	2695	2352
2176	HARD DISK 10MB SYSTEM	3395	2822
2177	HARD DISK 15MB SYSTEM	3995	3293
2178	INTERFACE KIT	550	509

## \*\* PERCOM DATA

2398	PHD05 05MB HARD DISK SYSTEM	1595	1145
2399	PHD10 10MB HARD DISK SYSTEM	1995	1429
2400	PHD15 15MB HARD DISK SYSTEM	2495	1845
2401	PHD20 20MB HARD DISK SYSTEM	2995	2321
	SPECIFY APPLE DOS, PASCAL		
	SPECIFY CP/M (ALS OR MICROSOFT)		

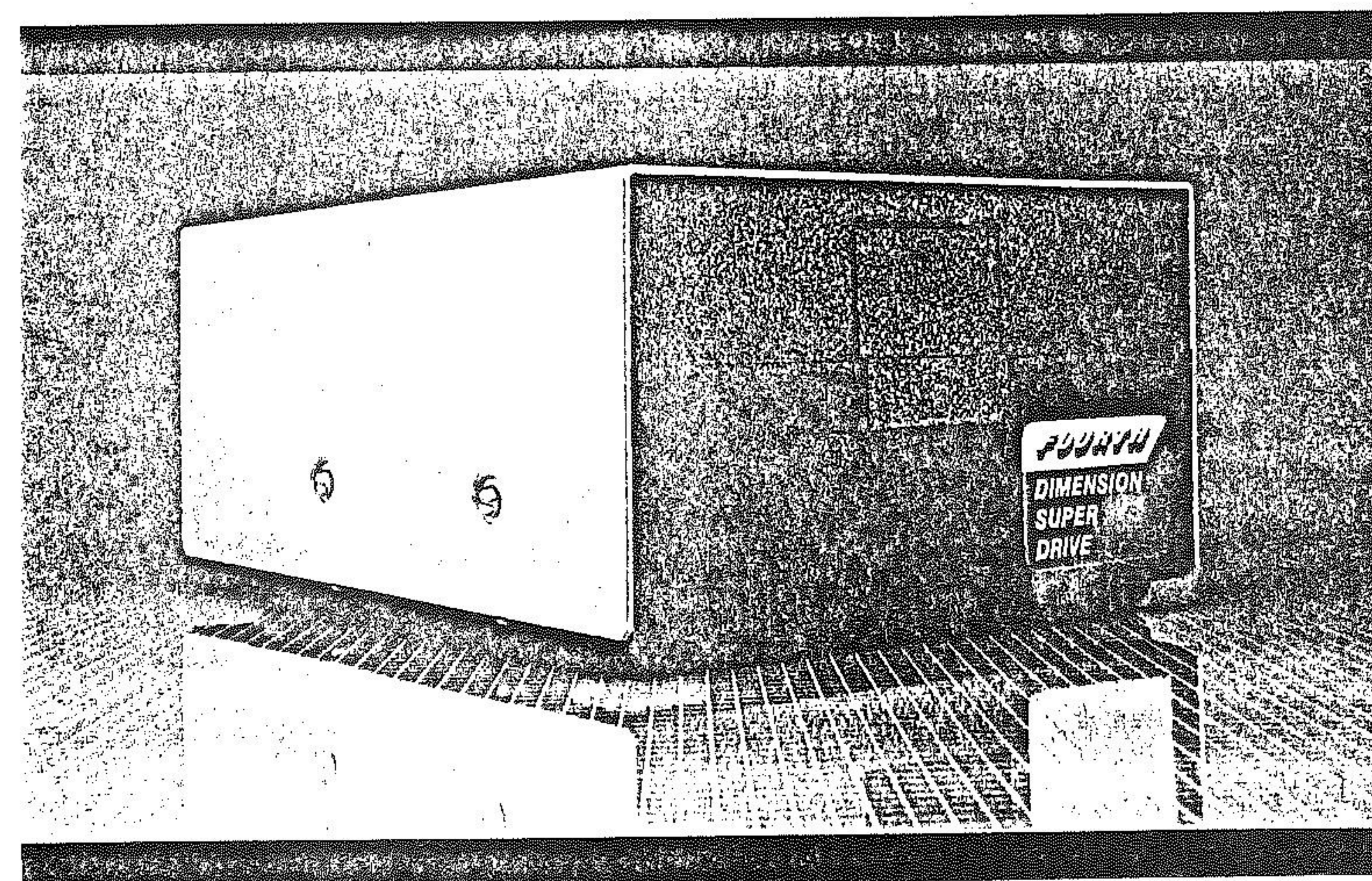
## \*\* PFENYAN KAPPA INTERNATIONAL

2520	CONTROLLER	63	
2519	NF505 5" DS SD 35/40T DRIVE	494	
2518	NF505 5" SS SD 35/40T DRIVE	269	

# DISK DRIVES

## FOURTH DIMENSION SUPER DRIVE™

the proven standard  
in Apple compatibility



Fourth Dimension's Super Drive™ is a high-speed, random access 5 1/4" floppy disk unit. This drive provides highly reliable, yet affordable disk storage and data handling capabilities for Apple users. Many years of design expertise have gone into the engineering of this drive to guarantee smooth operation and complete Apple compatibility. Thousands of units are in productive use today... field-proven to perform perfectly with most popular operating systems (DOS 3.2.1®, DOS 3.3®, PASCAL™, and CP/M®). Our advanced read/write electronics allow quicker, more accurate reading of data. Data integrity standards meet or exceed professional user requirements. Super Drive™... the Apple alternative you can depend on... you have our word on it.

DOS 3.2.1 and DOS 3.3 are registered trademarks of Apple Computer Corporation. PASCAL is a trademark of UCSD; CP/M is a registered trademark of Digital Research Corporation.

Fourth Dimension Systems  
3100 W. Warner Ave. #7  
Santa Ana, CA 92704  
(714) 850-1228



**Extended Warranty -**  
Because we expect the drive to perform reliably, we offer the standard 90 day parts and labor warranty plus a free 9 month warranty extension. A full year of professional support.

**Immediate Delivery -**  
Fourth Dimension Super Drives™ are available now... in dealer quantities. In fact when we receive your order before noon P.S.T., we provide same day shipment.

**Order With Confidence -**  
Because Fourth Dimension gives you what you expect. Apple compatibility, an extended warranty, immediate delivery and a reasonable price (suggested retail price \$419.00). We accept MasterCard and Visa orders. Dealer discounts are available. Contact us today.

A SUPER Buy at \$229

268 w/Controller



# DISK DRIVES

NMBR N ITEM LIST AAA#

## \*\* PROMETHEUS PRODUCTS

2579	APPLESURANCE CONTROLLER	125	97
2581	APPLESURANCE CONTROLLER PAC	150	122
2580	APPLESURANCE CONTROLLER-SOFTWARE	50	43

## \*\* QUENTIN RESEARCH

2619	APPLE-MATE 5" SS SD 35/40T DRIVE	335	
2620	APPLE-MATE CONTROLLER	65	
2621	DIAGNOSTICS DISK CONTROLLER	125	
2622	Q-DOS DISK OPR SYS ENHANCEMENT	20	
2627	Q505 05MB WINCHESTER HARD DRIVE	2195	
2628	Q510 10MB WINCHESTER HARD DRIVE	2395	
2629	Q515 15MB WINCHESTER HARD DRIVE	2695	
2630	Q520 20MB WINCHESTER HARD DRIVE	2995	
2631	Q531 31MB WINCHESTER HARD DRIVE	3195	

## \*\* QUME

2641	TWO 8" DS SD DRIVES W/PWR SUPPLY 1995 1661		
	USE SVA OR VISTA CONTROLLER		

## \*\* RANA SYSTEMS

2651	ELITE 1 5" SS SD 40T DRIVE	379	288
2653	ELITE 1 W/CONTROLLER CARD	519	378
2654	ELITE 2 5" DS SD 40T DRIVE	649	450
2655	ELITE 2 W/CONTROLLER CARD	749	540
2656	ELITE 3 5" DS DD 80T DRIVE	849	584
2657	ELITE 3 W/CONTROLLER CARD	949	678
2652	ELITE ONE CONTROLLER CARD	145	90

## \*\* RGB DESIGNS

3436	DIAGNOSTIC CONTROLLER	125	97
3434	MINITAU SLIM SS SD 5" DRIVE	349	263
3435	MINITAU W/CONTROLLER	479	350
3432	TAUR II SS SD 5" DRIVE	325	244
3433	TAUR II W/CONTROLLER	450	325

## \*\* SAMSON

2770	CONTROLLER 5" DS	115	97
2769	CONTROLLER 5" SS	115	97
2767	HALFHEIGHT 200 5" SS SD BELT DR	369	291
2766	HALFHEIGHT 300X 5" SS SD DRIVE	399	311
2768	HALFHEIGHT 310 5" DS SD DRIVE	649	499

\*\* PLEASE NOTE, THROUGHOUT THE CATALOG, 5" MEANS 5-1/4"

NMBR N ITEM

LIST AAA#

## \*\* SORRENTO VALLEY ASSOCIATES

	> FLEX PACs INCLUDE MEGAFLEX CD		
2867	AMS5005 05MB 5" HARD SYSTEM	3339	305
2868	AMS5010 10MB 5" HARD SYSTEM	3595	317
2864	AMS8101 2 SS 8" DRIVES W/DISK2+2	1995	190
2865	AMS8201 2 SS 8" DRIVES W/ZVX4	2295	208
2866	AMS8202 2 DS 8" DRIVES W/ZVX4	2995	258
2858	CABLE-ZVX4 TO 2-8" DRIVES	50	4
2873	MAXIFLEX 1 8" DRIVE PAC	1450	
2874	MAXIFLEX 2 8" DRIVES PAC	2495	
2859	MEGAFLEX CONTROLLER	299	25
2877	MICROFLEX 2 3" DRIVE PAC	1490	
2876	MINIFLEX 2 5" DRIVES PAC	1799	
2875	MULTIFLEX 6MB 5-DSK DRIVE SYSTEM	1449	
2878	PORTAFLEX 1 5" DRIVE PAC	775	
2857	ZVX4 CONTROLLER-8" DD AUTO BOOT	445	400
2862	ZVX4 CP/M STARTUP 8" DRIVE	37	37
2863	ZVX4 DOS TO IBM FILE TRANSFER	75	72
2861	ZVX4 PASCAL STARTUP 8" DRIVE	37	37

## \*\* TAVA

3126	APPLETTE I SLIMLINE 35/40T	399	306
3127	APPLETTE II SS SD 35/40T TEAC	599	525
3128	CONTROLLER CARD	99	97

## \*\* TRAK MICROCOMPUTER

3204	AMBASSADOR 10MB HARD DRIVE SYS	2895	2384
3205	AMBASSADOR 15MB HARD DRIVE SYS	3195	2631
3201	C2000A DUAL 8" TRIMLINE DRIVES	1999	
3202	COMMANDER 10MB HARD DRIVE SYSTEM	2295	1912
3203	COMMANDER 15MB HARD DRIVE SYSTEM	2595	2162
3198	CONTROLLER CARD C5A	135	103
3196	Pi-1 5" SS SD 35T DRIVE	299	240
3197	Pi-1 W/CONTROLLER	430	333
3199	Pi-2 SLIM 5" SS SD 40T DRIVE-JUL		
3200	Pi-3 SLIM 5" SS SD 40T DRIVE-OCT		

## \*\* TRANTOR SYSTEMS

3218	HARD DISK SYSTEM 05MB	1995	1661
3219	HARD DISK SYSTEM 10MB	2495	2077
3220	HARD DISK SYSTEM 15MB	2995	2465
3221	HARD DISK UTILITY MANAGER	30	24

## \*\* VISTA COMPUTER

3298	DD 8" CONTROLLER A800	379	311
3294	DUET SLIM 5" DS SD 40T DRIVE	420	364
3295	DUET W/CONTROLLER CARD	499	431
3296	QUARTET-2 DUET SLIM SYSTEM	849	737
3292	SOLO 5" SS SD 35T DRIVE	299	259
3293	SOLO W/CONTROLLER CARD	379	328
3297	SOLO/DUET CONTROLLER	92	86
3299	V1000 2-8" SS DRIVE SYSTEM	1549	1296
3311	V1000 DS W/CONTROLLER	1975	1596
3312	V1000 DS W/O CONTROLLER	1699	1411
3310	V1000 SS W/O CONTROLLER	1399	1167
3300	V1100 2-SLIM 8" DS DRIVE SYSTEM	2400	1967
3309	V1100 W/O CONTROLLER	1899	1596
3301	V1200 06MB CARTRIDGE DRIVE SYS	1549	1213
3302	V1200 06MB CARTRIDGE PAC	69	68
3308	V1200 CONTROLLER A801	379	311
3307	V1200 W/O CONTROLLER	1399	1131

# DISK DRIVES

NMBR N ITEM

LIST AAA#

## \*\* VSC TECHNOLOGIES

3314	VSC50A 5" SS SD DRIVE	285	
3313	VSC55A SLIMLINE 5" SS SD DRIVE	310	

## \*\* WANT PRODUCTS

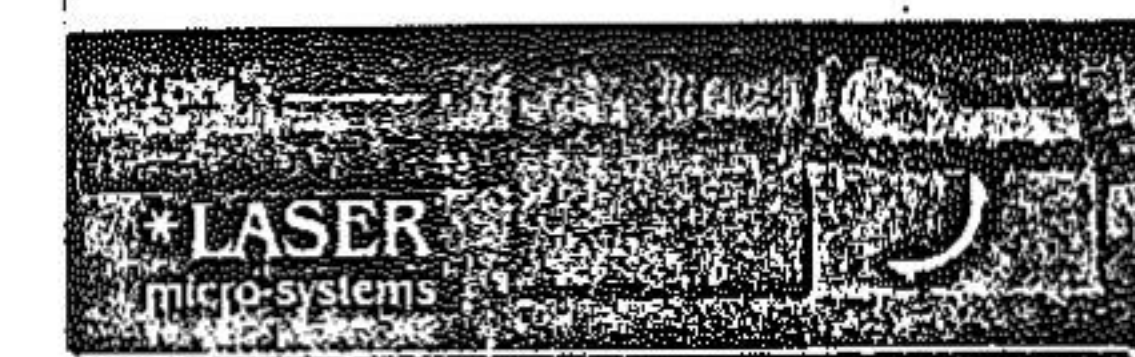
3341	CONTROLLER CARD	75	59
3340	SLIMLINE 5" SS SD TEAC DRIVE	375	286
3342	TWO SLIMLINE DRIVES IN CABINET	749	568

## \*\* XCOMP

3382	PERSONAL HARD DISK 4X4 8MB		
3383	PERSONAL HARD DISK 8X8 16MB		

The LASER Disc Drive is a high speed Slim-Line 5 1/4" floppy disc drive. At 41 mm (1 1/2") it stands half the height of a conventional drive. The Slim-Line size makes it easy to handle or stack along with its pleasing appearance.

LASER Disc Drive has a Mean Time Between Failure (MTBF) of over 8,000 hours. It is designed for Apple® compatibility and engineered for total reliability. The LASER Disc Drive reads DOS 3.2.1®, DOS 3.3®, PASCAL™, and CP/M.®



## A SLIM-LINE 5 1/4" FLOPPY DISC DRIVE

By LASER micro-systems, inc., using TEAC FD55A

- 1 1/2" High
- Low Heat
- DC Direct Drive Motor

### WARRANTY

As we offer the finest 41 mm (1 1/2") Slim-Line Disc Drive on the market it is sold under a 12 month warranty on parts and labor.

Tracks	35
Tracks With Patch	40
Storage Capacity	
35 Tracks	144 K bytes
40 Tracks	163 K bytes
Track Density	48 TPI
Number Sector/Track	13 or 16
Access Time Track to Track	6 m. Sec
Rotational Speed	300 RPM

Physical Specs:	
Height	41 mm 1 1/2"
Width	146 mm 5 3/4"
Length	203 mm 8"
Weight	15 kg 3 lbs. 5 oz.

Power Requirements	
DC + 12V ± 5% 0.3 A typ. 0.7A MA	
DC + 5V ± 5% 0.55 A typ. 0.7A MA	

Temperature Specs:	
Operation	4-46° C
Transportation	-40-62° C
Storage	-22-47° C

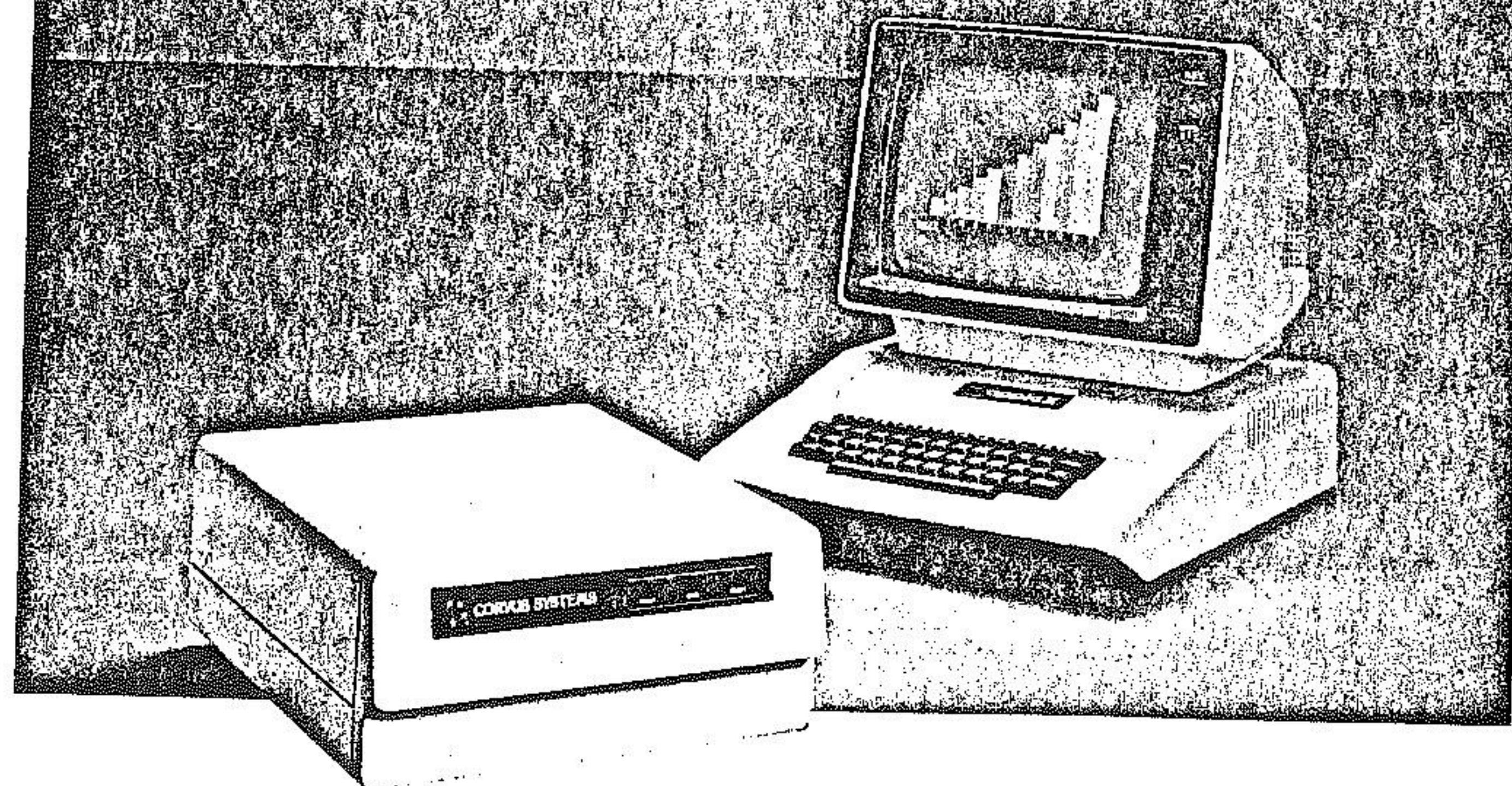
Relative Humidity	
Operation	20-80% noncondensing
Storage	1-95% noncondensing

\*Specifications based on TEAC FD55A unit

If you get something to work, Don't screw with it!



## 6/12/18 MEGABYTE

Winchester Disk Systems for the  
APPLE II and IIe COMPUTERSMultiply The Power of Your  
Apple II

With the latest Winchester disk system technology from Corvus Systems, you can give your Apple II or IIe computer the power and speed it needs for today's demanding computer applications. With such features as thin-film plated media and superior head-positioning systems, the Model 6, Model 11 and Model 20 all offer the advantages of our compact, quiet 5 1/4 inch design. With all these systems, you can include the field-proven Corvus MIRROR® video tape backup system for simple, cost-effective Winchester backup.

## Built-in Expandability

Corvus designs all its products with your future needs in mind. You can start with a single disk system, and as your needs grow,

let additional computers share the disk and peripherals by means of the Corvus OMNINET™ or Multiplexer local area networks. These systems allow more than 60 Apple II or other brands of computers to share the disk system as well as printers and other peripherals. If on the other hand, you need more data storage capacity, you can add on more disk systems. No matter where your data storage and distribution needs may lead, you'll be able to get there with Corvus. Your Corvus dealer can show you how.

## Reliable Winchester Technology

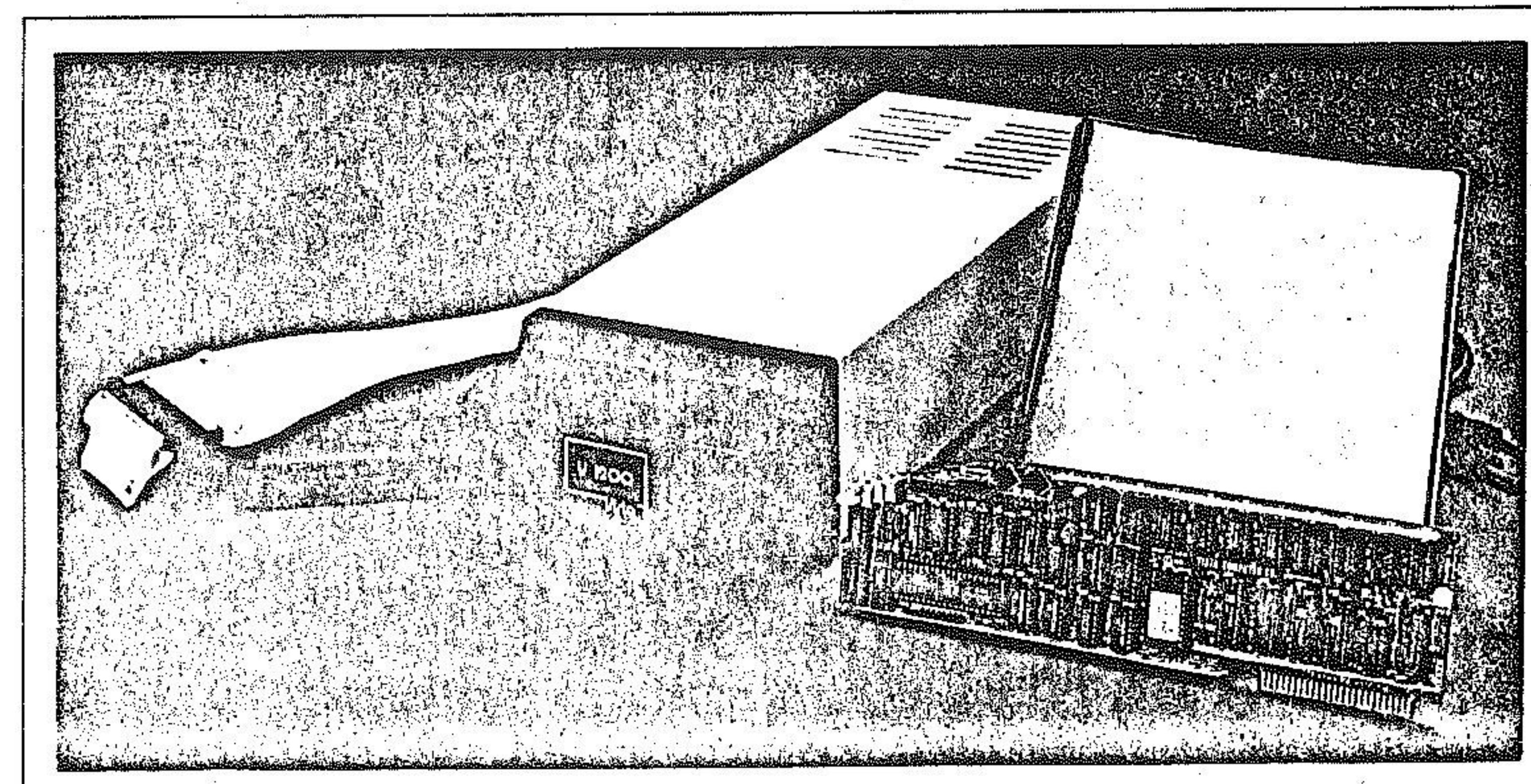
The Corvus line of 5 1/4 inch Winchester disk systems sets new standards for reliability. Thin-film plated media on the Model 11 and Model 20 allow greater bit densities without sacrificing data integrity. The sealed environment

keeps dust, smoke, and other particles from reaching the disk surface, and an automatic spindle brake protects the drive during shipping and handling. The Corvus intelligent disk controller insures rapid, reliable data transfer with such features as read-after-write verify, automatic error retries, transparent formatting with CRC (Cyclic Redundancy Check) Error Detection, and high-speed data transfer using DMA (Direct Memory Access). Corvus disk systems require no preventive maintenance.

## Corvus Software

Corvus provides all the software you'll need to support Apple DOS 3.3, Apple Pascal, and Apple CP/M. You can put data from any or all of these operating systems on a single disk system by dividing

**Vista** Computer Company, Inc.



## V1200

## Description:

Mass Storage for your Apple II™ has always been a problem. On one hand, there were the exotic, expensive hard disks with no cost efficient means of backup. On the other hand, the Apple floppy drive lacked the speed and storage demanded by today's professionals.

Vista's V1200 offers both at an incredibly attractive price. The removable VistaPak cartridges offer 6 Megabytes of removable storage each and can be backed up like a floppy.

Now hard disk storage and speed can be yours with the added capability of interchangeable media. The V1200 eliminates the worries of head crashes, drive alignments, lost data, or backup with a new application of field-proven floppy technology.

The VistaPak cartridges hold 6MB of formatted data each. The removable cartridge allows you to keep duplicates of your valuable data as well as to keep separate paks for your accounting, wordprocessing, spreadsheet and other applications. No other storage device offers more in flexibility and capability.

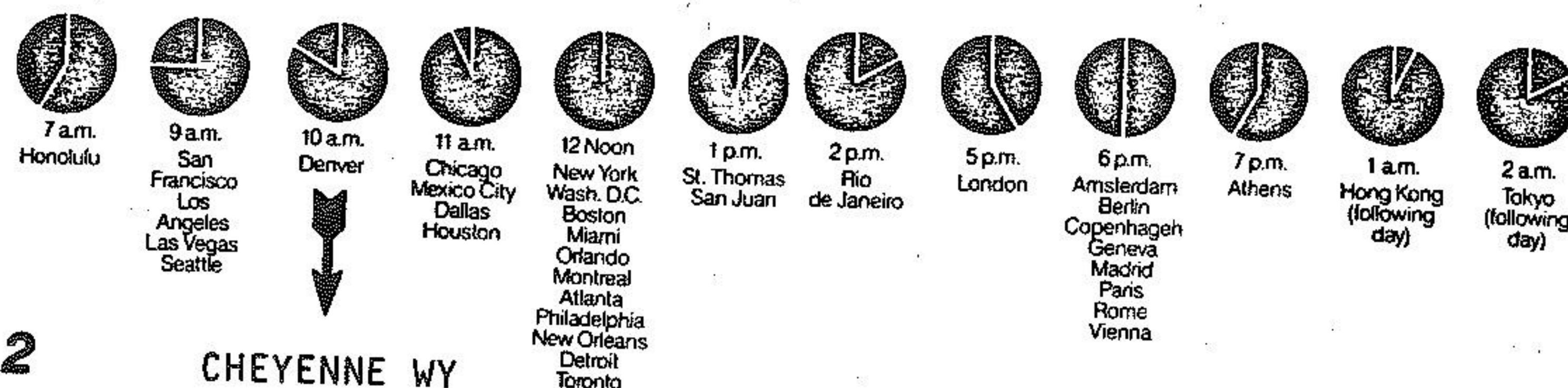
The system includes drive, cable, controller, software, and one Vistapak cartridge.

## Features:

- Microprocessor Controlled Drive
- No Mechanical Adjustments
- DMA Controller
- Removable Data Cartridges
- CP/M, DOS & Pascal Compatible
- Quickcharge™, DOS Enhancement Included
- Documentation Provided — Includes Theory of Operation, Utilities, Schematics and Diskette
- Uses all standard Apple DOS commands (OPEN, CATALOG, LOCK, DELETE, LOAD . . . etc.) Except for INIT which has been improved and enhanced in a Vista format routine
- 2K x 8 PROM contains Autoboot functions and all V1200 Driver Code allowing complete memory usage map compatibility with Apple DOS 3.3
- Enhancement to Apple "FID" Program included
- Vista 120 Day Warranty

★ ★  
★ ★ **CORVUS SYSTEMS**

This chart refers to standard time. Most countries observe daylight savings time in the summer by advancing their clocks one hour.





# MEGAFLEX<sup>®</sup> ABILITY

## You Pick The Disk System, MegaFlex Controls It!

### WITH SOFTDRIVERS FOR A FLEXIBLE FUTURE!

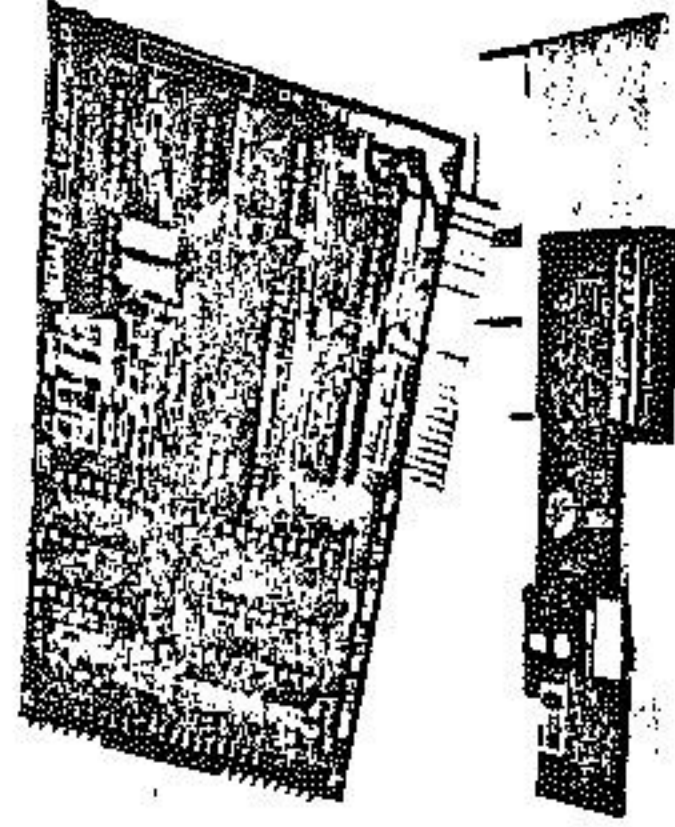
MEGAFLEX—a universal floppy disk controller and modern alternative to the Apple drive system offering increased storage, improved reliability and... FLEXIBILITY.

Enjoy megabytes of online storage with your choice of micro, mini, or maxi drives—or even 6Mb with the Amlyn cartridge pack! Ideal for high-capacity storage now, Winchester-disk backup later.

The MEGAFLEX secret is to autoboot soft-drivers that match the needs of your drive system. All hardware functions are software-controlled. MEGAFLEX can match new drive capabilities without hardware changes. Drive-dependent ROMs have been eliminated.

### APPLE III? OF COURSE!!

MEGAFLEX is compatible with BASIC, CP/M, Pascal, VISICALC, SOS and DOS-emulation on the Apple III, Apple II, Franklin Ace and Basis. All language features and operating system commands (LOAD, BRUN, etc.) are standard. If you can operate Apple drives you can operate MEGAFLEX! Your Apple software will run without modification too.



### BRIDGE THE APPLE FORMAT BARRIER!

The MEGAFLEX diskette does what Apple's cannot—read and write diskettes from other computers! Software-controlled industry-standard IBM 3740 or System 34 type formats allow the MEGAFLEX library of formatting software to read and write Altos, Radio Shack, Osborne, and IBM PC diskettes. (Call for the latest software details.)

### MORE STORAGE, MORE UNIVERSAL FEATURES, LOWEST COST

MEGAFLEX with 8" maxi or high density 5.25" minis gives you 1.2 Megabyte of formatted data per diskette for 8 times the file and data size! MEGAFLEX offers flexible software choices:

- data rate (250/500 Kbits per second),
- single and double density recording, and
- single/double sided drive operation (max 4 drives).

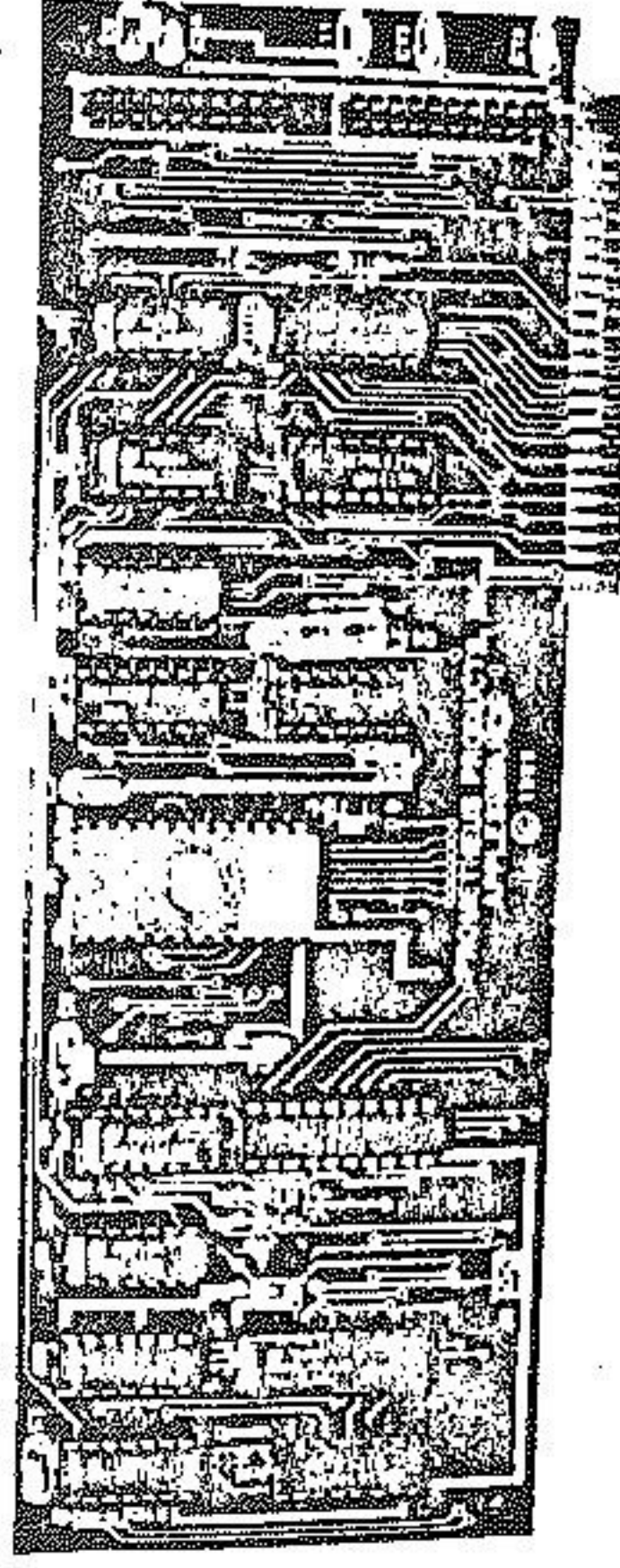
MEGAFLEX has the lowest chip count of any controller today! This means less power, a cooler Apple and better reliability. Lowest price, highest performance, that's MEGAFLEX!

## MEGABYTER

A Division of SVA

1722 SORRENTO VALLEY ROAD  
SAN DIEGO, CA  
(619) 452-0001  
TWX 910-335-2047 APPLE TWO SDG

## APPLESurance II AUTOMATIC DIAGNOSTIC and ASSURANCE PACKAGE FOR YOUR APPLE II COMPUTER



### FEATURES

- Apple II<sup>®</sup> compatible disk controller card
- Power up diagnostics of critical Apple hardware
- Test include ROM, RAM, PROCESSOR, ROM card, and RAM card tests
- Descriptive error messages, in certain cases even indicating which IC is bad!
- Extensive disk-based diagnostics for further sub-system checks and peripheral card tests.

### DESCRIPTION

APPLESurance is the only automatic diagnostic and assurance system of its kind available for your Apple II computer. Unlike other disk based diagnostic packages, APPLESurance checks the critical Apple hardware automatically every time you power on your Apple. This insures the reliability, integrity and dependability of your Apple.

APPLESurance is a two part diagnostics system. Part One of APPLESurance is an Apple II compatible disk controller card which contains sophisticated diagnostics which run when your Apple II is powered on. It runs automatically, identifying failures before they can have a chance to cause loss of your valuable data and time. If you've ever had a system crash after hours of valuable work then you NEED APPLESurance.

The APPLESurance disk controller runs basic system hardware checks at power up of your Apple II. It is not necessary to invoke this action, as it happens automatically. ONLY at power up.

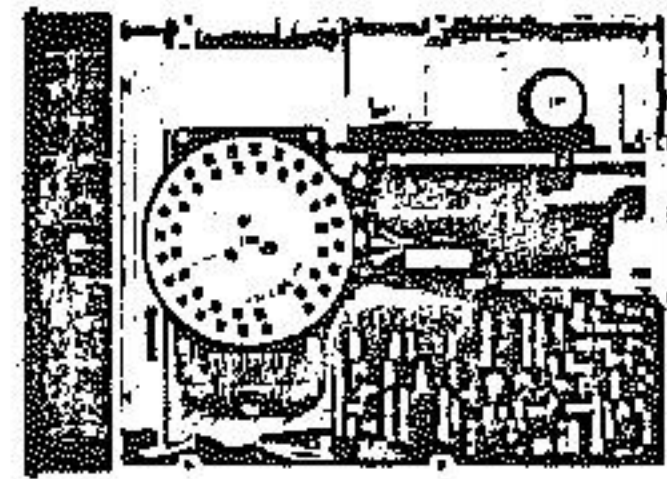
Thereafter, APPLESurance does not interfere with the operation of your Apple II but works normally as a fully compatible disk drive controller on your Apple II computer. The diagnostics portion of APPLESurance can be bypassed should you so desire. The areas that APPLESurance checks at power up are:

- MOTHER BOARD RAM
- LANGUAGE CARD RAM
- PROCESSOR TEST
- ADDRESS TEST
- MOTHERBOARD ROM
- ROM CARD ROM
- REFRESH TEST

This provides you with assurance that the basic areas of your Apple II are working. Should APPLESurance find an error in any area it will indicate it to you and in some cases even tell you which chip you need to replace to fix your Apple!

Advanced products at down-to-earth prices.

- Closed loop, speed control servo regulates instantaneous speed variations to within 1% for improved diskette interchangeability from drive to drive.
- Deeper clutch and spindle assembly for accurate media-to-spindle registration. Diskette damage and distortion of the diskette hole is virtually eliminated for longer, more reliable diskette life.
- Electronic damping on stepper motor substantially decreases hysteresis, shortens head settle time and improves positioning accuracy for faster, more accurate and quieter operation.



- Advanced mechanisms with steel band head positioning and direct drive beltless DC motors assure accurate head positioning, reduced diskette wear and longer, reliable, trouble-free operation. Tracking that leaves no room for error!

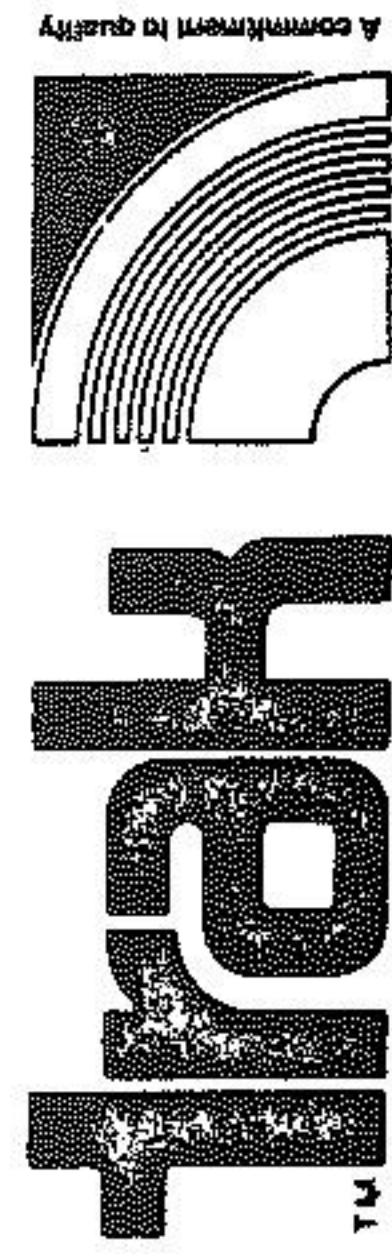
### PI-3 SETS YOUR APPLE FREE

Improving on a winner, to provide you with unprecedented user features, we designed the ultimate PI-3:

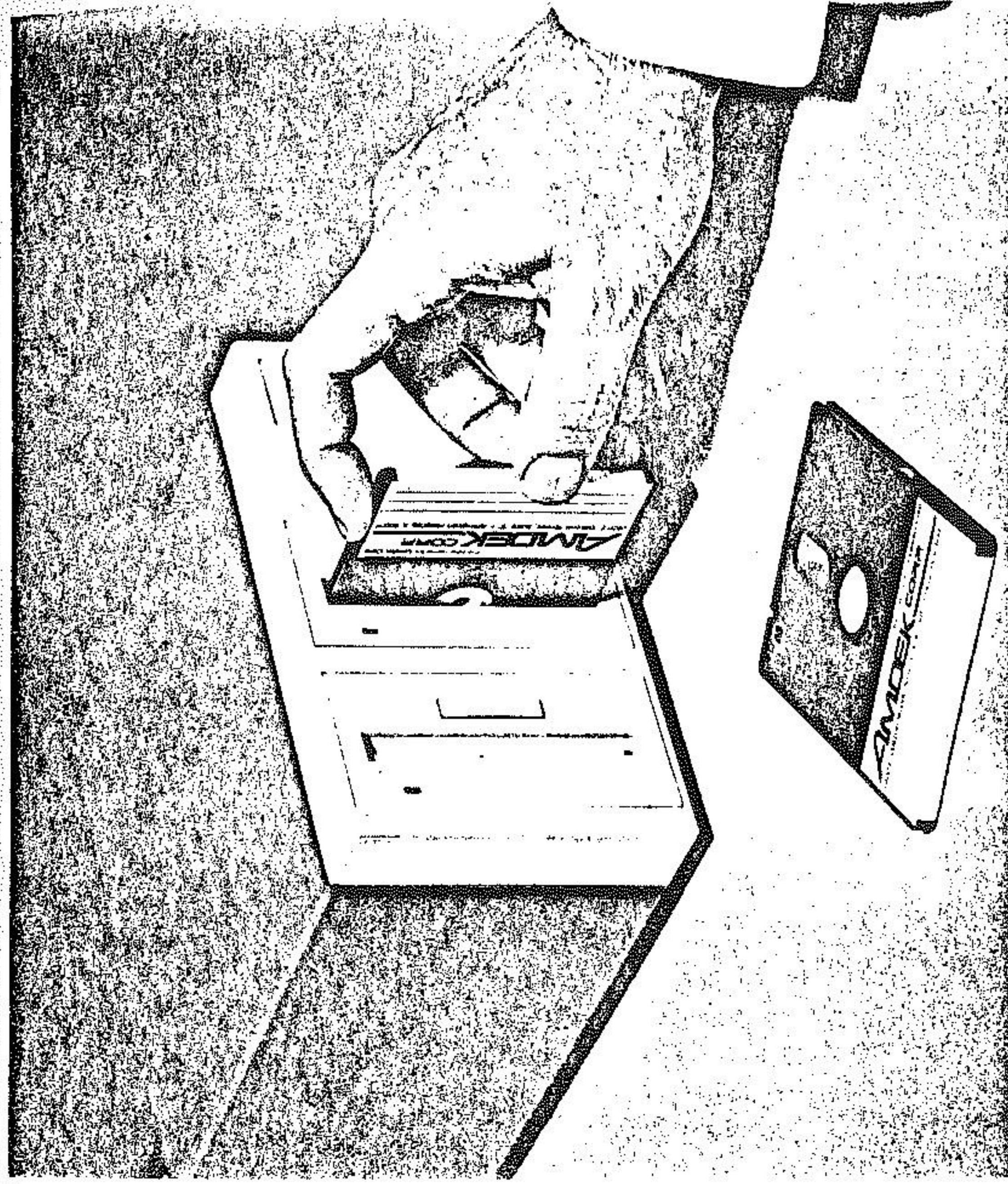
- Amazingly Compact  
The miracle of microspace! Our system is about 1/2 the size of Apple's drive, with expanded storage capacity at greater speed! And it's only 3" high at the bezel. Measures: 6" X 9" at the base.
- Command Control Panel  
Pressure sensitive control panel tells you of the system's activities through read and write indicators and a touch-sensitive write-protect switch to protect your valuable data on command. A digital track counter unfolds the mystery of the diskette and tells you where every bit of your data is located - an unprecedented programming aid!
- Beautiful and Intelligent  
Form and function combined to complement and enhance your Apple!

For additional information on our smart drives for the Atari, Apple or IBM PC, or on our new hard disk systems, contact your local computer dealer or write to us.

Call toll free: 800-322-4853 or  
in Illinois, call collect: 312-968-1716.  
TWX 910-222-1848



Apple is a trademark of Apple Computer Company.  
microcomputer corporation 1511 Ogden Ave., Downers Grove, IL 60515



### Features

- Economically priced for personal or business computers.
- Compact Micro-Floppydisk Drive accommodates two cartridges for up to 1 Megabyte capacity.
- Recording format, data transfer rate and disk rotation speed are compatible with standard 5 1/4" floppydisk drives.
- Hard-plastic 3" Micro-Floppydisk Cartridges have a protective, hinged cover and a "write protect" mechanism.

## Compact 3" Micro-Floppydisk Drive System

This 3" Amdek Micro-Floppydisk Drive offers up to 1 Megabyte storage and is plug compatible with 5 1/4" drives. Two drives (with built-in power supply) are furnished to accommodate the unique "shirt-pocket" size Micro-Floppydisk Cartridges. The hard plastic cartridge has a flip-type head cover to protect the Micro-Floppydisk from dust, scratches, or fingerprints.

## AMDEK CORP.

Amdek... Your guide to innovative computing!

THE COMPANY THAT BROUGHT YOU THE PI-1 DRIVE  
— THE BEST BUY IN APPLE PIE — NOW BRINGS YOU  
MORE VALUE WITH PI-2 AND THE ULTIMATE IN APPLE  
ENHANCEMENT WITH PI-3.

### THE BEST BUY IN APPLE PI

At a suggested list of \$299, PI-1 is positively the best buy in Apple-compatible drives. PI-1 features complete software and hardware compatibility with Apple II, IIe, Franklin and BASIS computers with TRAK's own improved read-write circuitry.

### CHOOSE PI-2 FOR MORE VALUE

For expanded performance and storage capacity of 163 KB on 40-tracks, we designed the revolutionary PI-2 and incorporated significant technological advances:

- Quick track-to-track access of 5ms is made possible by our low friction carriage design. It's 4 times faster than Apple's own factory unit.





# POWER BACKUP

NMBR N ITEM LIST AAA\$

## \*\* CUESTA SYSTEMS

1548	DATASAVER 200W BACKUP 2-15 MIN	695	598
1547	DATASAVER 90W BACKUP 2-15 MIN	395	345

## \*\* DATASHIELD

1560	BACKUP POWER 150W 15 MINUTES	299	229
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## \*\* ELECTRONIC PROTECTION DEVICES

1673	GRIZZLY 200W UPS 20 MIN	895	926
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## \*\* RH ELECTRONICS

2662	CIGARETTE LIGHTER PLUG/CORD	30	26
2660	GUARDIAN ANGEL 150W 120V	595	499
2661	GUARDIAN ANGEL 150W 230V	640	523
2665	GUARDIAN ANGEL DUST COVER	25	21
2664	SUPER TRANSVERTER 12V	150	131

## \*\* SOLA

2856	BATTERY BACKUP 10 MIN	1579	1471
2855	BATTERY BACKUP 20 MIN	1484	1383

## \*\* SUN RESEARCH

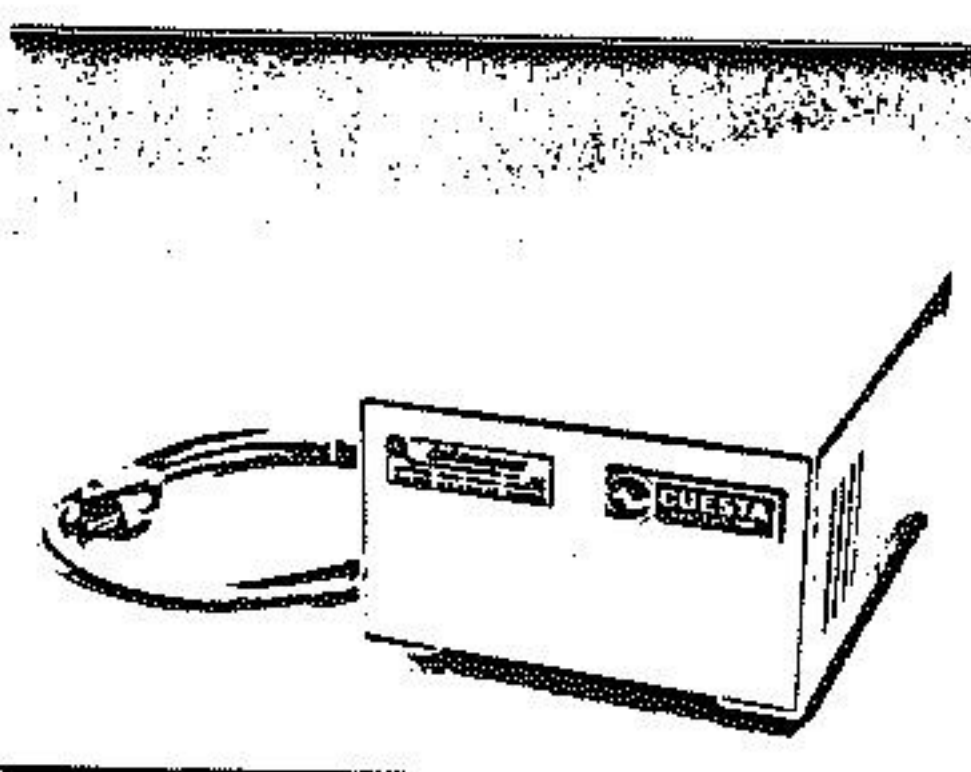
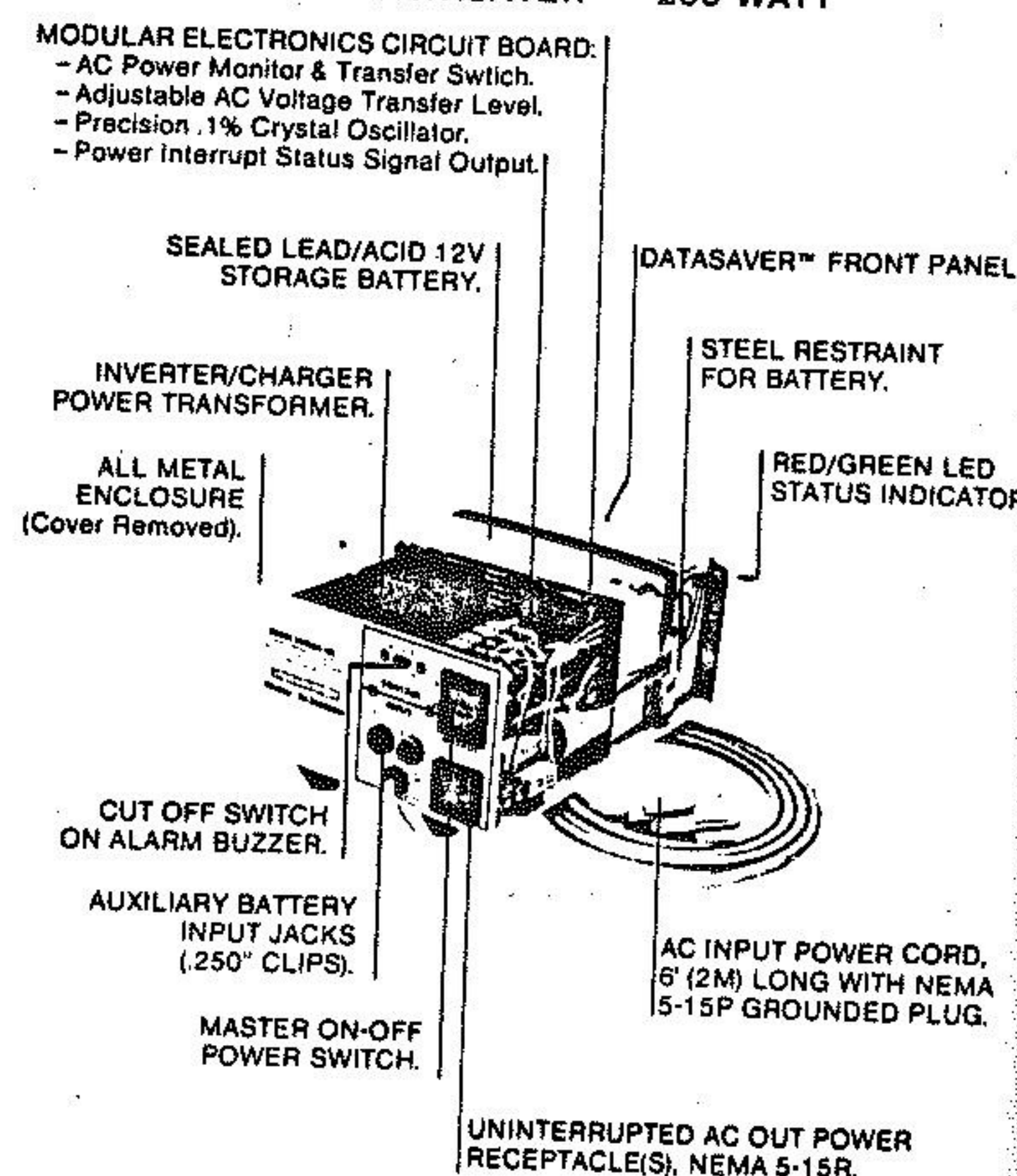
3030	MAYDAY60 + 10 1000W	1950	1857
3026	MAYDAY60 + 2 250W	525	519
3027	MAYDAY60 + 25 250W	700	691
3028	MAYDAY60 + 6 600W	900	878
3029	MAYDAY60 + 65 600W	1140	1096
3025	MAYDAY60 + 5 150W	475	475
3024	MAYDAY60 150W	400	400

## DATASAVER™ AC POWER BACKUP MODELS

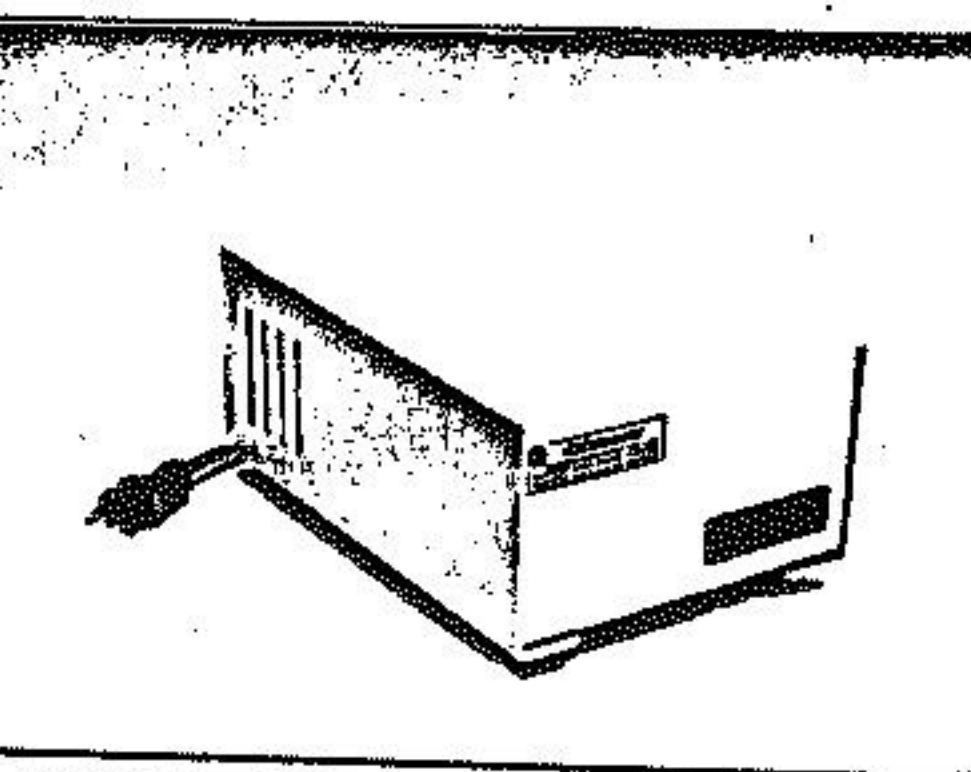
	90 WATT		200 WATT	
	9012060	9024050	20012060	20024050
Output Power (Watts, Full Rated Load)	90	90	200	200
AC Operating Voltage (VAC)	120	240	120	240
Operating Frequency (Hertz, ±0.10%)	60	50	60	50
AC Line Input Rated Current (Amps)	1.5	0.8	2.5	1.5
AC Internal Overload Fuse (Amps)	2	1	3	2
AC Line Input Voltage Range (VAC)	102-132	204-264	102-132	204-264
Line to Battery Transfer (msec Max)	10	12	10	12
Auxiliary Battery Voltage (VDC)*	11-14.4	11-14.4	10.8-14	10.8-14
VAC Out on Battery (RMS at 75% DC)	102-132	204-264	102-132	204-264
Holdup Time on Internal Battery (Minutes)				
At Full Rated Output Load	2-5	2-5	2-5	2-5
At Half Rated Output Load	15	15	15	15
Output Receptacles (NEMA 5-15R)	2	2	1	1
Weight (Pounds/kilograms)	10/4.5	10/4.5	14/6.4	14/6.4
Size (inch/cm)	4/10.2 HIGH, 6/15.2 WIDE, 9/22.9 LONG			
FOB Factory Direct Price (Resale Discounts Offered)	\$395 ea.	\$415 ea.	\$695 ea.	\$730 ea.

\*The 200 Watt DATASAVER™ has 1 Amp at 14 Volts available to charge an external auxiliary battery for extended holdup time.

## FUNCTION IDENTIFICATION VIEW of DATASAVER™ - 200 WATT



90 WATT DATASAVER™



200 WATT DATASAVER™

CUESTA SYSTEMS, INC.

# SURGE PROTECTION

NMBR N ITEM LIST AAA\$

## \*\* ELECTRONIC PROTECTION DEVICES

1668	LEMON & SOCKET WALL PLUG	60	48
1669	LIME & SOCKET 4.5' CORD SWITCH	90	71
1671	ORANGE & SOCKET CORD/SW/FILTERED	140	108
1670	PEACH 3 SOCKET WALL PLUG FILTER	98	77
1672	PLUM	50	40

## \*\* ELECTRONIC SPECIALISTS

1710	AC-SF-31 350W 1 3-PRONG	34	23
1712	AC-SFK-21 1000W 1 2-PRONG	32	22
1711	AC-SFK-31 1000W 1 3-PRONG	36	24
1714	DP515-ISO32 COML GRD 2 SKTS	70	47
1713	DP515-SFT32 INDUST GRD 2 SKTS	79	53
1717	FLCB-LP CB LO-PASS FILTER	21	14
1718	FLCB-T CB LO-PASS FILTER TUNABLE	21	14
1674	ISO-01 COML GRADE 3 SOCKETS	77	51
1675	ISO-01CB	87	57
1676	ISO-01CBS	96	63
1677	ISO-01RS	95	62
1678	ISO-03 INDUST GRADE 3 SOCKETS	116	76
1679	ISO-03CB	126	82
1680	ISO-03CBS	135	88
1681	ISO-03RS	134	87
1682	ISO-04 COML GRADE 6 SOCKETS	129	84
1683	ISO-04CB	139	90
1684	ISO-04CBS	148	96
1685	ISO-04RS	147	95
1686	ISO-06 COML GRADE SWITCHABLE 3	180	115
1687	ISO-06CB	190	121
1688	ISO-06CBS	199	127
1689	ISO-06RS	198	126
1690	ISO-07 INDUST GRADE 5 SOCKETS	187	120
1691	ISO-07CB	197	126
1692	ISO-07CBS	206	132
1693	ISO-07RS	205	131
1694	ISO-08 INDUST GRADE SWITCHABLE 5	227	145
1695	ISO-08CB	237	151
1696	ISO-08CBS	246	157
1697	ISO-08RS	245	156
1698	ISO-09 COML GRADE 10 SOCKETS	209	134
1699	ISO-09CB	219	140
1700	ISO-09CBS	228	146
1701	ISO-09RS	227	145
1702	ISO-12 INDUST GRD SWITCHABLE 4	233	149
1703	ISO-12CB	243	155
1704	ISO-12CBS	252	160
1705	ISO-12RS	251	159
1706	ISO-17 MAGNUM LAB GRADE 4 SKTS	201	129
1707	ISO-17CB	211	135
1708	ISO-17CBS	220	141
1709	ISO-17RS	219	140
1715	TVFM-HP FLAT 300 OHM LEAD	17	12
1716	TVFM-HP/CX ROUND 75 OHM LEAD	19	13

## \*\* DYMARC INDUSTRIES

1637	CLIPCUBE 1102-200VA 1.8A 2 SKTS	300	262
1638	CLIPCUBE 1105-500VA 4.6A 2 SKTS	425	371
1639	CLIPCUBE 1107-750VA 6.3A 4 SKTS	695	601
1640	CLIPCUBE 1110-1000VA 8.4A 4 SKTS	795	687
1641	CLIPCUBE 1115-1500VA 12A 4 SKTS	950	811
1634	CLIPPER 3 SOCKETS	69	63
1635	CLIPSTRIP 6 SOCKETS	112	102
1636	CLIPSTRIP SUPER 6 SOCKETS	475	416

## \*\* SCOOTER/OHM ELECTRONICS

2810	PWR STRIP/6 SCKTS/6' CORD/CB/SW	48	38
2809	PWR STRIP/6 SCKTS/9' CORD/FT/SW	75	64

## \*\* SNAP IT

2834	POWER SURGE CONTROLLER	60	51
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## \*\* TII ELECTRONICS

3181	POWER LINE MONITOR & PRINTER	1200	994
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## POWER SUPPLIES

## \*\* M&R ENTERPRISES

2041	SUP'R SWITCHER-REPLMT PWR SUPPLY	295	224
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## \*\* MOUNTAIN COMPUTER SYSTEMS

2156	EXPANSION CHASSIS-ADD ON PWR PAC	750	568
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## EXTENSION CORDS

## \*\* ANTRONICS

1137	POWER STRIP & SOCKETS 15' CORD	25	20
1136	POWER STRIP & SOCKETS 6' CORD	22	18

## \*\* SCOOTER/OHM ELECTRONICS

2807	PWR STRIP/4 SCKTS/6' CORD/CB/SW	26	21
2808	PWR STRIP/6 SCKTS/6' CORD/CB/SW	29	24

IF IT CAN,  
IT WILL.



# SURGE PROTECTION

## ESP KLEEN LINE® SUPER FILTER/SPIKE SUPPRESSOR INDUSTRIAL GRADE

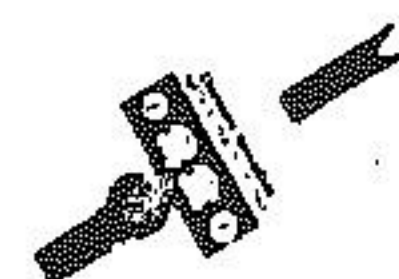
- FEATURES:**
- Dual Balanced-Pi Super Filter (25 KHz to 200 MHz)
  - 6500 Amp, 8/20 usec Spike Suppression
  - Inductively isolated ground

- APPLICATION:**
- Solves Severe Hi-Fi & VTR problems
  - Solves difficult instrumentation interference
  - Protection from chronic Hi-voltage Line Spikes
  - Protect installations using portable or irregular power
  - Clear up pops & hash on electronic organs & Hi-Fi
  - Invaluable on Word Processors, Office Machines & Cash Registers
  - Buffer hash generating tools or appliances from Power Line



DP-515-SFT-32

## ESP TV and FM HI-PASS INTERFERENCE FILTERS



TVFM-HP FM-HP  
Flat Twin-lead (300 ohm)



TVFM-HP/CX FM-HP/CX  
Round Co-Ax Cable (75 ohm)

### INTERFERENCE RELIEF FROM:

- CB interference
- auto ignition
- diathermy
- industrial machinery
- electronic games
- microprocessor hash
- household appliances

### EFFECTIVELY PREVENTS INTERFERENCE FROM ENTERING TV or FM RECEIVERS

- ESPECIALLY USEFUL FOR CB INTERFERENCE**
- when CB blasts through on ALL TV channels
  - when CB blankets ENTIRE FM band

### CONNECTS DIRECTLY TO TV or FM SET ANTENNA TERMINALS

- installs in seconds
- no wires to cut
- no holes to drill
- no extra antenna lead or cable needed

### FACTORY TUNED - NO ADJUSTMENT NEEDED

- Install It - Forget It!
- METAL CASE FOR ADDED INTERFERENCE ELIMINATION AND STURDINESS
  - Flat 300 ohm twin lead most commonly used for home installations
  - Round 75 ohm co-ax cable used for VTR, apartments, CATV, hospitals, motels

Model TVFM - filters are designed for use with either TV or FM receivers

Model TVFM-HP flat 300 ohm twin-lead hi-pass filter

Model TVFM-HP/CX round 75 ohm co-ax cable hi-pass filter

\$18.75

18.75

GENERAL	COMMERCIAL	INDUSTRIAL
VOLTAGE	125 Volts, AC	125 Volts, AC
FREQUENCY	60 Hz	60 Hz
CURRENT		
TOTAL	15 Amps	15 Amps
EACH CHANNEL	8 Amps	8 Amps
LOAD HANDLING:		
TOTAL	1875 Watts	1875 Watts
EACH CHANNEL	1000 Watts	1000 Watts
DIELECTRIC TEST	4000 Volts	4000 Volts
OPERATING TEMPERATURE	45°C to 80°C	45°C to 80°C
PLUGS (Standard 3 prong, grounded)	NEMA 5-15P	NEMA 5-15P
SOCKETS (Standard 3 prong, grounded)	NEMA 5-15R	NEMA 5-15R

SUPPRESSOR	COMMERCIAL	INDUSTRIAL
CLAMPING:		
CLAMP VOLTAGE		
RMS	145 Volts	145 Volts
PEAK	200 Volts	200 Volts
POLARITY	Bi-Directional	Bi-Directional
SPICE CURRENT, PEAK	4500 Amps	4500 Amps
IEEE Standard 800 microsecond waveform		
PULSE POWER, PEAK:		
20 microseconds	2,800,000 Watts	4,200,000 Watts
1 microsecond	25,000 Watts	70,000 Watts
ENERGY DISSIPATION:		
20 microseconds	50 joules	81 joules
1 microsecond	30 joules	70 joules

ISOLATION FILTER (per channel)	COMMERCIAL	INDUSTRIAL
DIFFERENTIAL (TRANSVERSE) MODE:		
TYPE	BALANCED - PI	DUAL BALANCED - PI
FREQUENCY RESPONSE	100 KHz to 200 MHz	25 KHz to 200 MHz
ATTENUATION	50 dB	60 dB
GROUND ISOLATION	Inductive	Inductive
COMMON MODE:		
TYPE	L-C	L-C
FREQUENCY RESPONSE	100 KHz to 200 MHz	25 KHz to 200 MHz
ATTENUATION	30 dB	40 dB
EFFECTIVITY:		
ELECTRO-MAGNETIC COUPLING	EMI Attenuation	EMI Attenuation
RADIO FREQUENCY RADIATION	RFI Attenuation	RFI Attenuation

MODEL SENSITIVE	COMMERCIAL	INDUSTRIAL
ISOLATED CHANNELS	ISO-1	ISO-3
SOCKETS	3	3

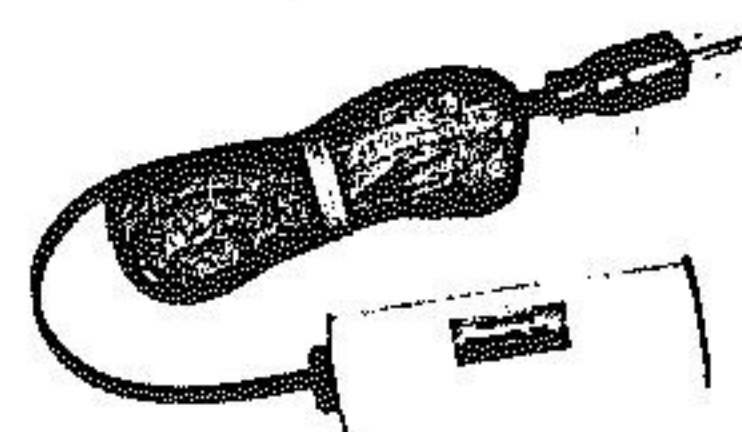
PHYSICAL	COMMERCIAL	INDUSTRIAL
LENGTH	5"	9 1/4" (18 cm)
WIDTH	4 1/4"	5 1/4" (13 cm)
HEIGHT	3"	2 1/4" (6.4 cm)
CORD LENGTH	3'	3' (90 cm)
WEIGHT	1 lb	1 1/2 lb (700 g)

PIONEER IN MICROCOMPUTER INTERFERENCE CONTROL

ESP Electronic Specialists

## COMBINED SUPPRESSOR/FILTER

1000 watts AC-SFK-21 31.85 AC-SF-31 33.95  
AC-SFK-31 35.95



### KLEEN LINE® HI VOLTAGE SPIKE SUPPRESSOR

- Spikes are caused by lightning, heavy motors, switch gear and power outages
- Suppressor absorbs line spikes - 4500 Amp, 8/20 pulse suppression
- Protects delicate & valuable instruments, machines, amplifiers
- May provide limited protection from direct lightning hits and long term power line over-voltage

- Reduce
- MicroProcessor Glitches
  - Hi-Fi/Stereo/Organ Buzz & Pops
  - Tool and Appliance Hash
  - Delicate Instrument Damage
  - Business Machine Interference

### KLEEN LINE® HASH FILTER (110KHz to 200 MHz)

- Power Line Hash is caused by business machines, tools, appliances, diathermy, microprocessors, motors, spherics, 2-way radio
- Hash disrupts microprocessors, audio gear, communications, inter-coms, data transfer, TV, NC machinery, business machines
- Line Cord Filter strips off AC power line carried hash for interference-free operation of personal computers, delicate equipment, Hi-Fi, VTR
- Install Line Cord Hash Filter at microprocessors, tools, motors, business machines, appliances, Hi-Fi, VTR, TV, electronic organ, CB base station

## CB LO-PASS FILTER



LO-PASS FILTER  
FLCB-LP

### FEATURES:

- Designed For CB Operators
- not a warmed over HAM filter!
- Connects Directly to CB Rig
- no extra cables needed
- no cable splicing
- installs in seconds
- Plated Metal Housing
- maximum durability
- maximum shielding

### USE THE CB LO-PASS FILTER TO:

- reduce harmonics which cause TV & FM interference
- reduce incoming hi-frequency interference
- restore neighborhood peace
- restore family peace

### ULTRA-COMPACT

- requires absolute minimum space behind CB rig
- requires no special tools or skills for installation
- factory pre-tuned for maximum TV & FM interference reduction

### LO-Pass CB Filter

Model FLCB-LP

\$20.95

### TUNABLE CB FILTER

- Same Features as Outlined for FLCB-LP Lo-Pass Filter above
- Physical size and appearance identical to FLCB-LP Filter
- Operator tunes and adjusts Filter for MAXIMUM interference reduction
- Useful where interference exists on only 1 channel or where CB rig radiates interference on only 1 CB channel
- Tunable over TV and FM frequencies

### Tunable CB Filter

Model FLCB-T

\$20.95



ISO-3RS  
REMOTE SWITCH



ISO-1

## 3A PRESS

Continued from Page 11.

### DISK HUB RINGS

The hub reinforcement ring is a concession to the Apple disk drive manufacturer who lacked the engineering skill to make a disk drive that absolutely will not damage the disk it was solely designed to handle! (Can you imagine designing a toaster that on occasion burns the toast no matter where you set the timer?) A hub

reinforcement ring is a nice to have feature if you insert-remove-insert the same disk into your less than perfect disk drive very, very often. For example, your favorite game disk or utility disk. Also if you are careless in how you insert the disk and how you close the Apple Disk Drive door, a hub ring is also good insurance. But, as time passes it won't make any difference as all the manufacturers have or are putting hub rings on all their disks.

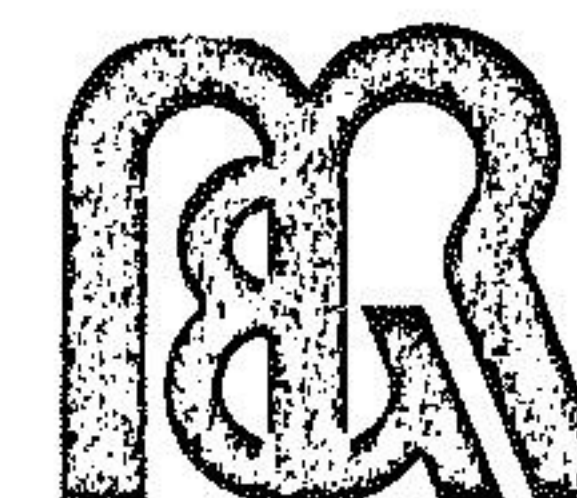
### SAVING THE HUB

If you have one of those older Apple Disk II drives that now and then mangles the edges of the hub hole in your disks, here is a tip. After you have inserted a disk do not immediately close the door. First, type PR#6 (or CATALOG, or RUN), then press the RETURN key and just as soon as the disk drive light comes on signalling the motor is spinning, carefully close the drive door. Do not snap it shut, or forcefully close it. The point is to wait for the motor to start to spin, while carefully closing the drive door which will help the disk to settle into place as you carefully close the door. A little practice and you will be doing this quickly and smoothly.

Continued on Page 50.

## POWER SUPPLY

## SUP' R SWITCHER



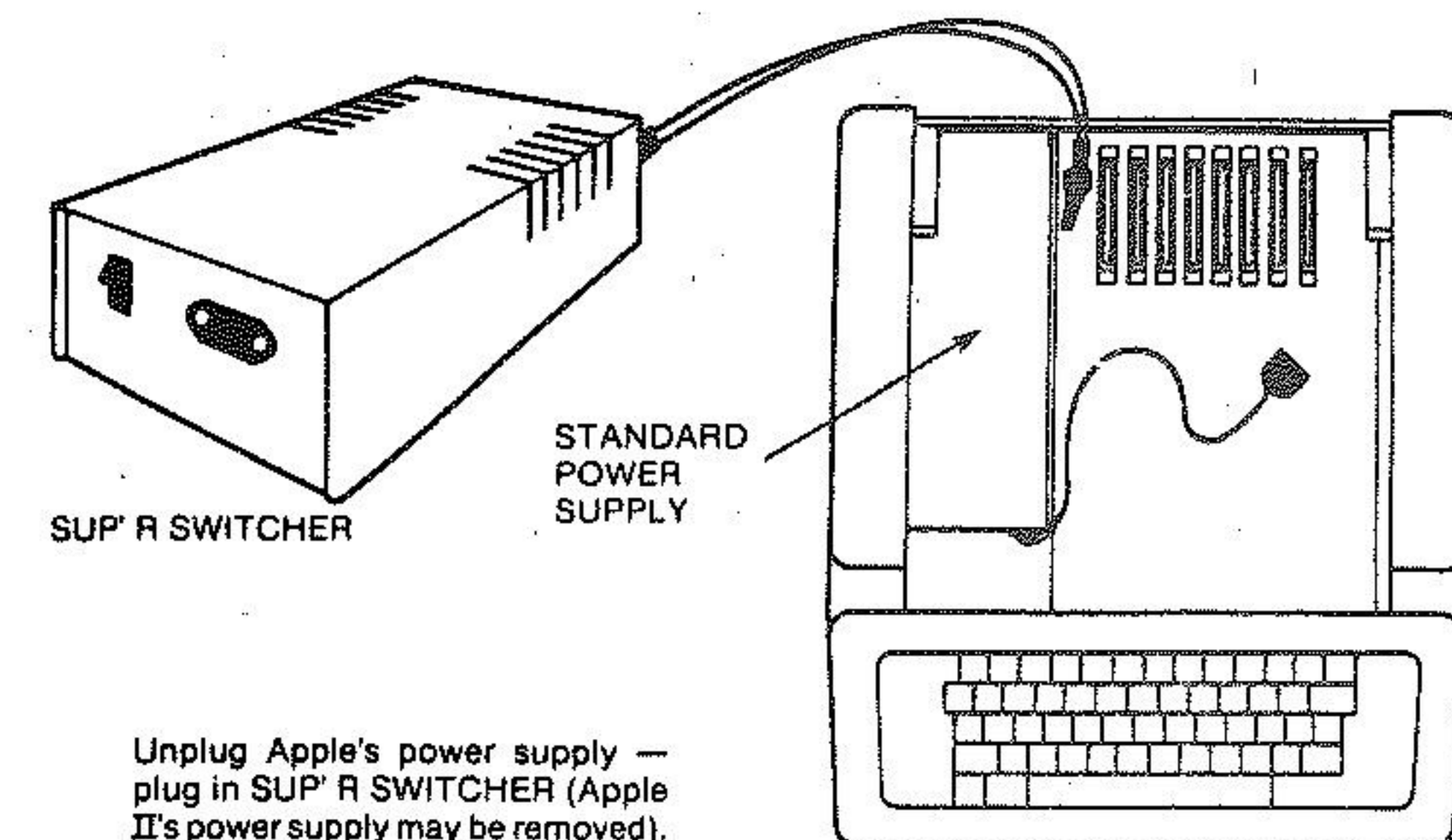
M & R ENTERPRISES  
910 GEORGE STREET  
SANTA CLARA, CALIFORNIA 95050  
(408) 580-0160

### OVERLOADING YOUR APPLE II?

ARE YOU USING MORE THAN FOUR PERIPHERAL SLOTS? IS YOUR SYSTEM HANGING UNEXPECTEDLY?

In many circumstances, the standard Apple II power supply cannot handle more than about 4 peripherals, so, you may need SUP' R SWITCHER — the add-on power supply that safely expands your Apple II system.

- Provides power for more peripherals — handles all eight peripheral slots
- Runs cool — efficiency in excess of 70%
- Longer IC life — power supply mounted outside lowers IC surface temperature
- Light weight switching power supply — not a linear
- Overvoltage protection
- Easy plug-in installation —

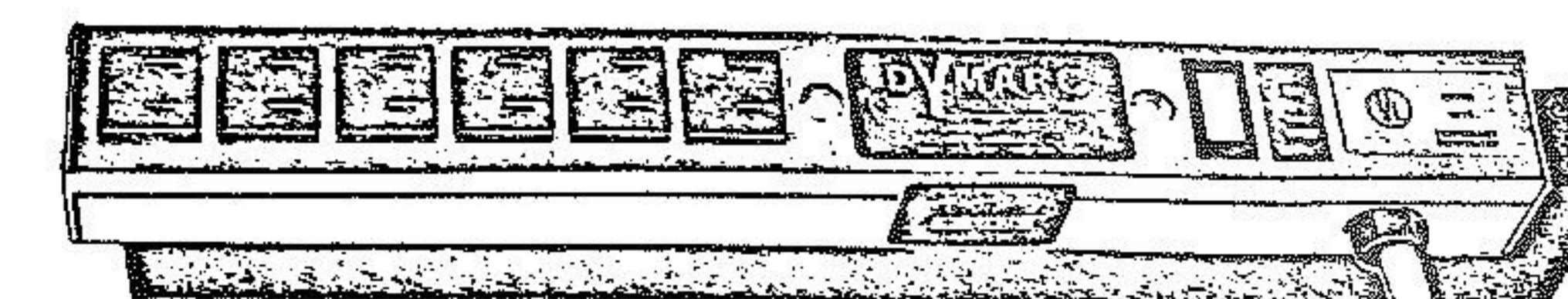


Unplug Apple's power supply — plug in SUP' R SWITCHER (Apple II's power supply may be removed).

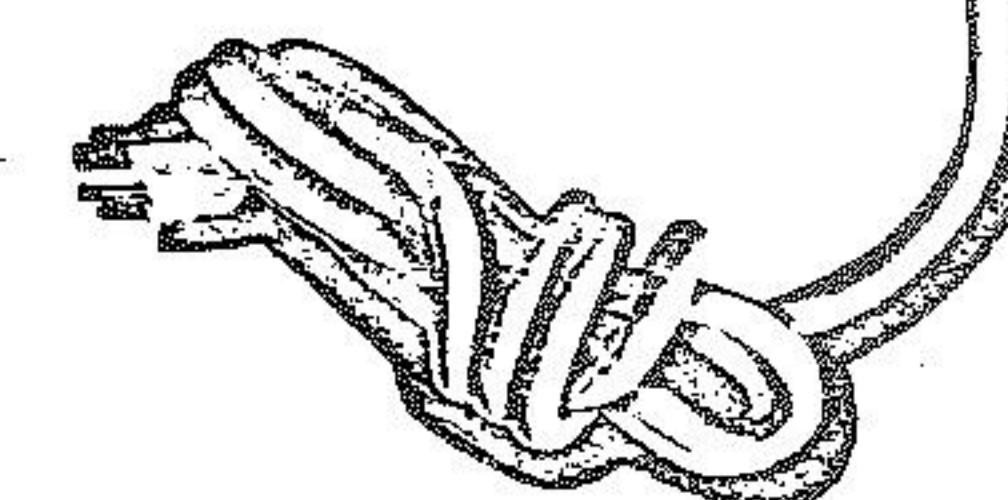
### TECHNICAL SPECIFICATIONS

- Input: 90 to 135 VAC/60Hz or 180 to 270 VAC/50Hz
- Output voltage current: +5V @ 6A (Exceeds Apple's standard supply by 3.5A)
- +12V @ 1A (Intermittent to 3.5A)
- 12V @ 1A
- 5V @ 1A
- Ripple: 25mv, typical
- Full Load operating temperature: 0 - 50 degrees C. (32 - 122 degrees F.)
- Weight: 2.75 lbs.
- Dimensions: 3.75" H X 9.75" D X 6.25 W

## SURGE PROTECTION



CLIP STRIP



CLIPPER





# STATIC MATS

NMBR N ITEM

LIST AAA\*

## \*\* COMPUTERWARE

1424	TOUCHMAT 18 X 26"	82	65
1423	TOUCHMAT 24 X 26"	89	70

## \*\* COVER CRAFT

1494	STAT-PRUF MAT 18 X 24"	25	17
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## \*\* INTERVINYLS

> ALL MATS WITH 10' GROUND WIRE  
> DESIGNED FOR CARPET

1915	ANCHORSTAT MAT 36X48	90	59
1917	ANCHORSTAT MAT 45X53	124	81
1916	ANCHORSTAT MAT 45X53 LIP 30X10	114	75
1919	ANCHORSTAT MAT 48X60	150	97
1918	ANCHORSTAT MAT 48X60 LIP30X10	140	91
1920	ANCHORSTAT MAT 48X72	180	115
1921	ANCHORSTAT MAT 48X96	240	154
1922	ANCHORSTAT RUNNER 48" X 50 FT	1500	926

## \*\* TENEX

3150	GRIP-STAT CHAIR MAT 53x45 W/LIP	147	113
3151	GRIP-STAT CHAIR MAT 60x46 W/LIP	155	119
3152	SOF-STAT FLOOR MAT 36x60	78	62
3153	SOF-STAT FLOOR MAT 48x72	124	97

SOF-STAT: SPECIFY BROWN OR RED!

## \*\* WATTSOUT

3343	WATTSOUT-STATIC DISCHARGE DEVICE	10	9
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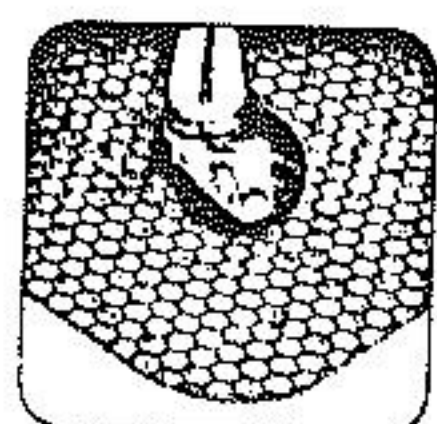
## A NEW CONCEPT IN STATIC CONTROL!

For use with microcomputers, printers, computer terminals, word processors, electronic typewriters and cash registers, telecommunications and other electronic equipment.

### SPECIFICATIONS:

Product	TouchMat™ Static Dissipative Table Mat
Material and Construction	Heat-laminated conductive vinyl in 3 layers (protective top layer, conductive film intermediate layer and conductive foam cushioning layer.) No adhesives used in laminating process.
Color	Computer-compatible, neutral beige
Surface Texture	Smooth, pigskin grain finish
Durability of Surface	Resistant to most chemicals and detergents. However, petroleum solvents will dissolve the vinyl and affect physical characteristics of mat.
Grounding	10' grounding cord with one megohm resistor is supplied with each mat. One end of grounding cord snaps onto mat. The other end, with an eyelet, must be attached to a suitable ground, such as a grounded electrical outlet or water pipe.
Charge Decay Time	0.05 seconds or less (charge potential 5,000 volts)
Resistance to Ground	Surface resistance of 10 <sup>9</sup> to 10 <sup>10</sup> ohms from any point on mat.
Humidity Dependence	Humidity or water immersion has no significant effect on electrical properties. Truly static dissipative even at low humidity.
Flammability	No burn rate; self-extinguishing
Temperature Stability	40° F to 100° F operating; -30° F to 150° F storage
Cleaning	Dirt build-up may affect mat performance. Clean mats periodically with detergent and warm water. Do not clean with petroleum solvents.
Reminder Labels	Each mat is supplied with 12 pressure sensitive adhesive labels (approximately 1x1 1/2"). "TouchMat before touching computer or accessories."
Thickness	3/8"
Sizes and Suggested Retail Price	24" deep x 26" wide \$89 18" deep x 26" wide \$82

Add Shipping-CALL!



### Tenex Grip-Stat™ Chair Mats

... drain static charges to below sensitivity levels in 1/10th of a second! Incredible performance! Unequalled value! Manufacturing breakthrough now offers all these features—all this security!

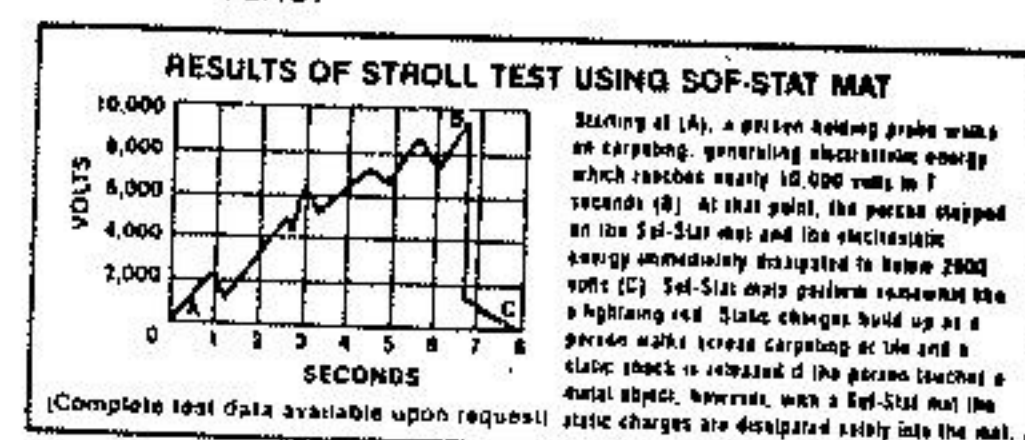
- Conductive material permanently bonded to tough vinyl base—won't wear off, not affected by aging or humidity.
- Fast-acting—regardless of humidity level!
- Exclusive Gripper™ Back is budge-proof on carpets. Molded-in grippers (144/sq. ft.) interlock with carpet fibers to hold mat securely in place!
- Crystal clear to let carpet beauty show thru!
- Complete grounding kit includes 15' ground cord with 1 Megohm resistor.
- Durable, scuff-resistant, easy-roll surface!
- Choice of Sizes! See Pricer for details.

\*For static control mat to dissipate charge, individual must wear shoes soled with leather or other conductive materials.

### Tenex Sof-Stat™ Floor Mats

Cushion-soft carpet with tough, non-skid back drains static charges fast!

- 100% electroconductive nylon yarn tufted to specially formed non-woven fabric dissipates static charge throughout entire mat.
- Flexible, tough vinyl back holds yarn in place and bonds with special skid-proof backing which resists movement on carpets and floors.
- Cuts static charges below shock levels instantly! Reduces static charge to below 2,000 volt level, the shock cut-off point for most people (see chart).
- No grounding kit required. Just place on floor!
- Perfect for low pile carpet and hard floors!
- Designer Colors! Cranberry Red and Brownstone.



# BEWARE STATIC

## Static Electricity—an unseen saboteur.

Whether you feel it or not, static electricity is ever present and is almost constantly being transmitted from one person to another and from people to objects and vice versa. Levels of static electricity may surprise you. The human body can develop and transmit levels of static electricity in excess of 20,000 volts without harm. Levels of 3,000 volts would pass completely unnoticed by humans, but cause malfunctions when transmitted to micro-sensitive elements of computers, word processors, and similar equipment.

A touch is all it takes to cause sudden memory loss, alteration, faulty data and other costly and time-consuming problems.

### Static Electricity Levels (EXHIBIT #1)

Volts	Effects
10,000	
5,000	Often found in uncontrolled areas.
3,000	
2,000	
1,000	Unfelt by human body.
500	
0	Harmless level.

### Anchor-Stat prevents equipment malfunction caused by static discharge.

The operator surrenders static electricity to the Anchor-Stat the instant he or she steps onto it. (SEE EXHIBIT #2). Static electricity is reduced to a harmless level of 500 volts within 1/4 of a second, and dissipates all static within seconds.

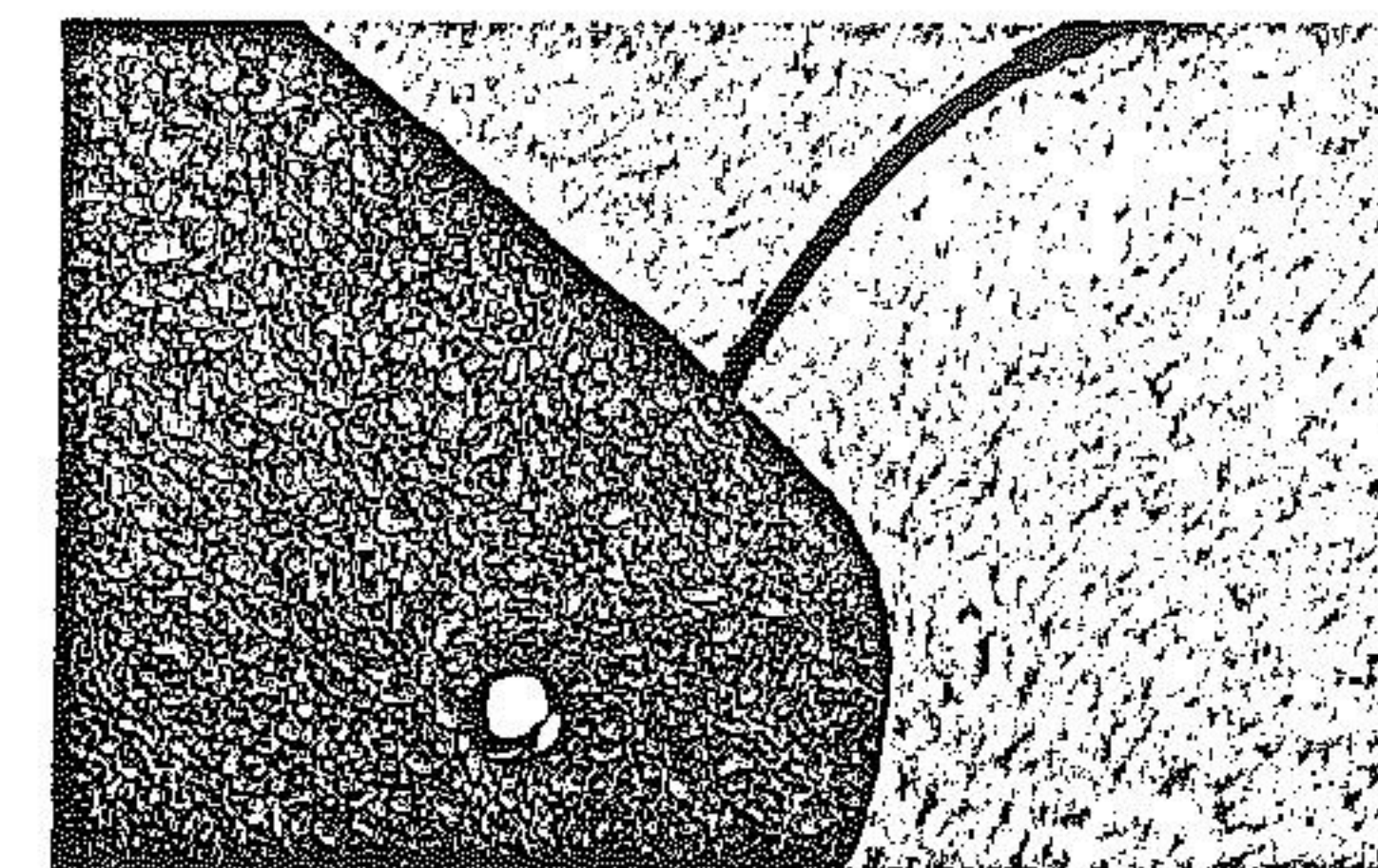
You will virtually eliminate problems caused by static discharge, with no interruption in work flow.

### Test results (EXHIBIT #2)

Static generation	Using the standard AATCC-134 test, Anchor-Stat drained a static charge of 5,600 volts (5.6KV) down to a safe level of 500 volts (0.5 KV) in a 1/4 of a second.
AATCC	
Volts	
6,000	
5,000	
4,000	
3,000	
2,000	
1,000	
0	
0	.50 sec. 1 sec. 1.50 secs. 2 sec. 2.50 secs.

### Continuous Protection.

Anchor-Stat's specially designed 10 ft. ground cord continuously drains off static electricity that is absorbed into the mat, thus eliminating "hot mats" and enhancing the overall efficiency of the mat. A built-in one (1) megohm resistor protects against "back shocks".



### Independent Laboratory Tested.

Comparative tests, conducted by an independent laboratory, prove the effectiveness of Anchor-Stat's static drawing capability. No other conductive mat out-performs Anchor-Stats in either speed or the capacity to draw harmful static charges down to safe levels that won't affect sensitive electronic equipment.

### Where do you need Anchor-Stat?

Anchor-Stat belongs anywhere automated office equipment is used, especially in uncontrolled environments.

Anchor-Stat is needed for:

- ☐ Computer Terminals (CRT's)
- ☐ Computer Printers
- ☐ Word Processors
- ☐ Small Computers
- ☐ Typesetting Machines
- ☐ Any kind of mechanical office equipment that uses friction feeding (i.e., folders and inserters), which can severely shock operators.

### One year warranty against cracking and breakage.

The conductivity of Anchor-Stat safely complies with industry standards set by the U.S. Department of Defense. Anchor-Stat mats will, under conditions of normal use, maintain static electric discharge at levels below those which can cause disturbance to electronic equipment in office environments. If the purchaser is not completely satisfied, the manufacturer's sole responsibility is limited to replacement with a like product or refund of the original purchase price at the option of Intervinyls.

## Anchors make it work!

The underside of Anchor-Stat has hundreds of tiny rigid protrusions, designed to hold the mat firmly in place on carpeted surfaces. A mat without the advantage of these anchors requires that the equipment itself be placed on the mat to stop movement, providing a potential path for static electricity to flow through the equipment. This not only defeats the purpose of a static control mat, but presents a possible safety hazard by circumventing the resistor in the ground cord.

### Easy installation.

Anchor-Stat lies flat and the ground cord is easily fastened to any point of ground.

### Advantages of vinyl.

Anchor-Stat is constructed of a highly conductive material and tough, durable vinyl that provides these advantages:

- ☐ Operator won't trip because the mat lies flat, won't curl or "dish".
- ☐ Textured finish hides scuff marks and provides a longer lasting "new" look, while facilitating controlled movement of castered chairs.

### Sizes to fit your needs.

Anchor-Stat is available in a wide range of sizes. There's one to fit your particular need, large or small. Thickness is .155 gauge vinyl; available without anchors for non-carpeted surfaces.



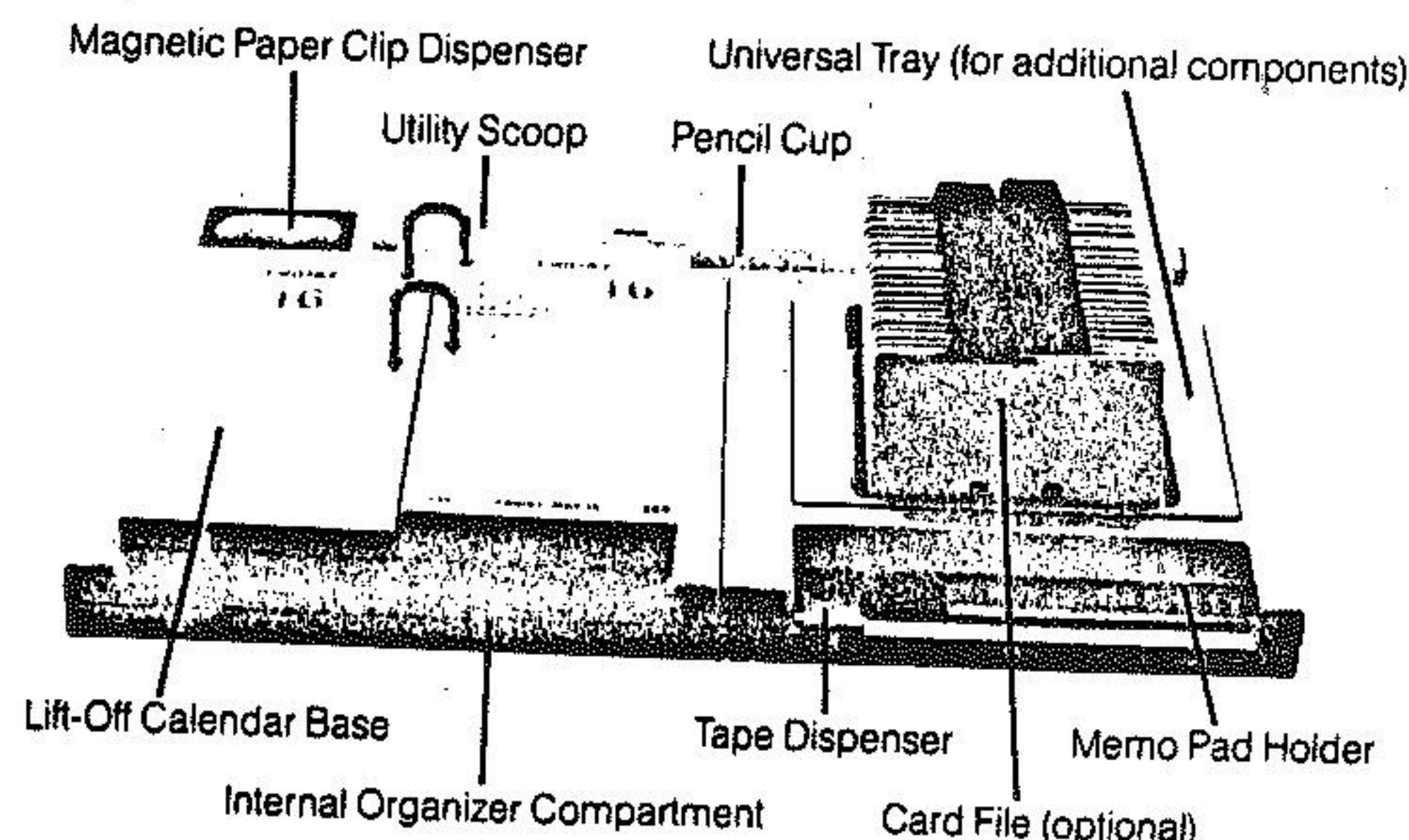


# HOME OFFICE

NMBR N ITEM LIST AAA\$

## \*\* TENEX

3155	COMPAXX CARD FILE	15	13
3154	COMPAXX DESK ORGANIZER	35	28
3156	DESK ORGANIZER W/CARD FILE	50	39

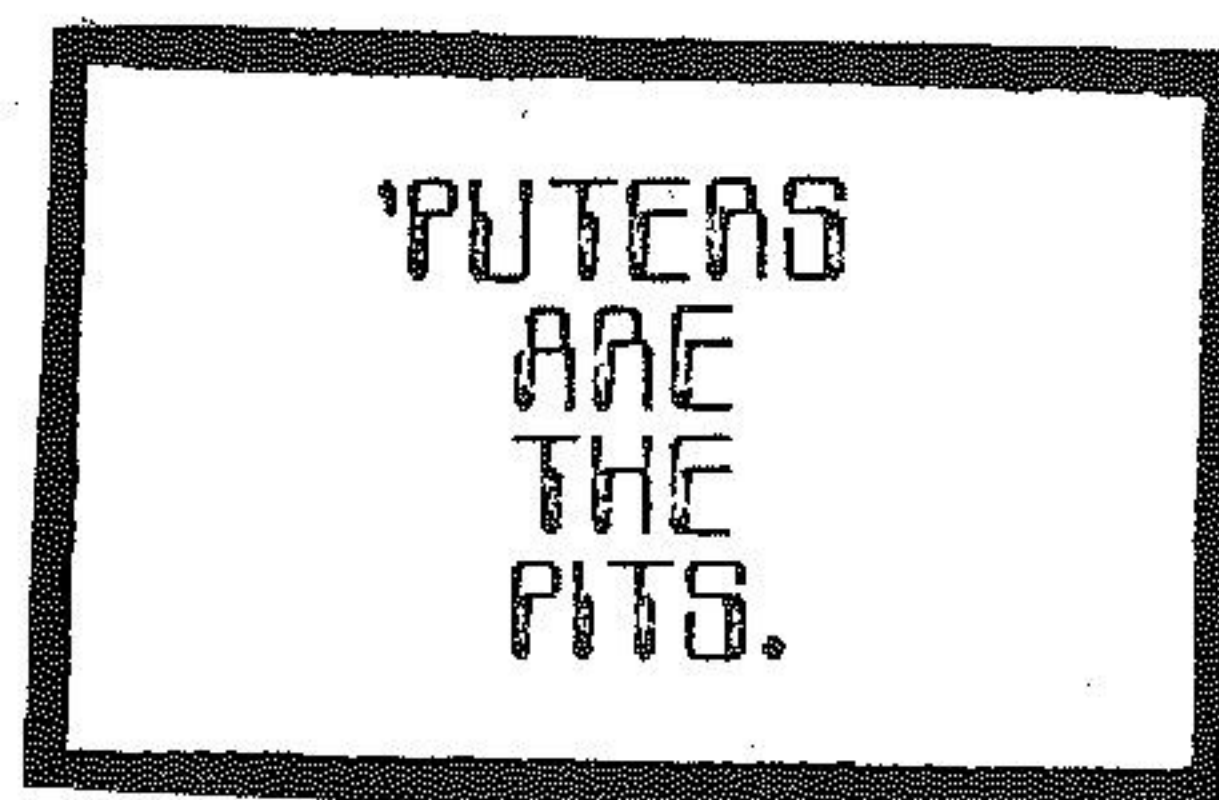


# TURNTABLES

NMBR N ITEM LIST AAA\$

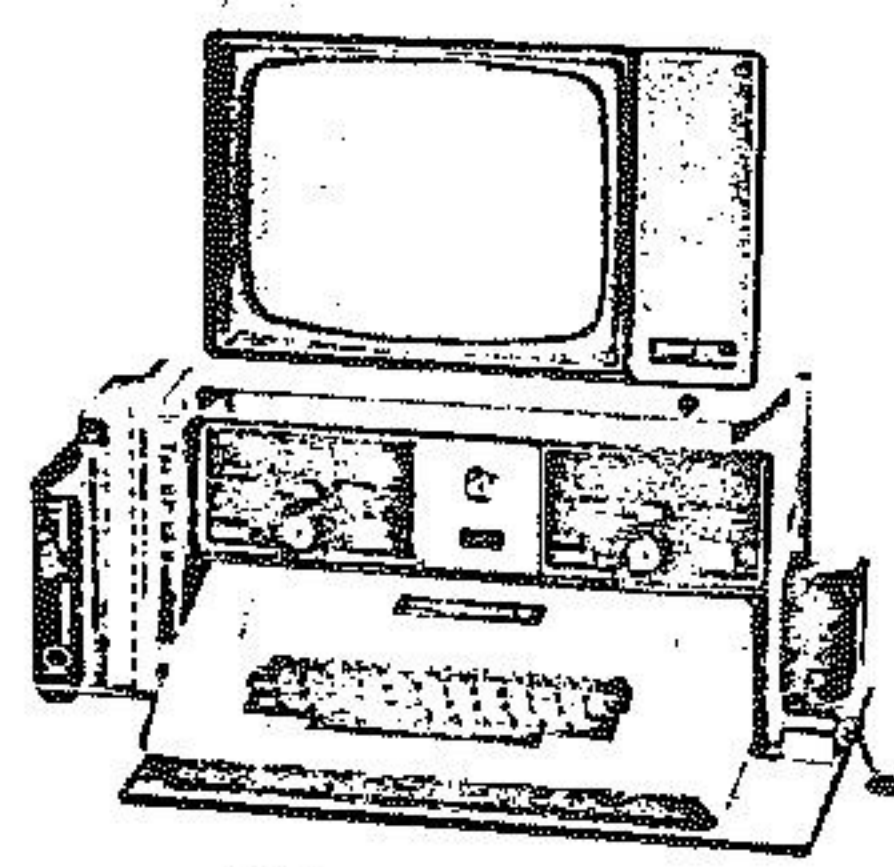
## \*\* RING KING VISIBLES

2734	TURNTABLE 16x20x1 WALNUT TT1620	43	
2735	TURNTABLE 22x26x1 WALNUT TT2226	53	



Add Shipping-See Pg 73

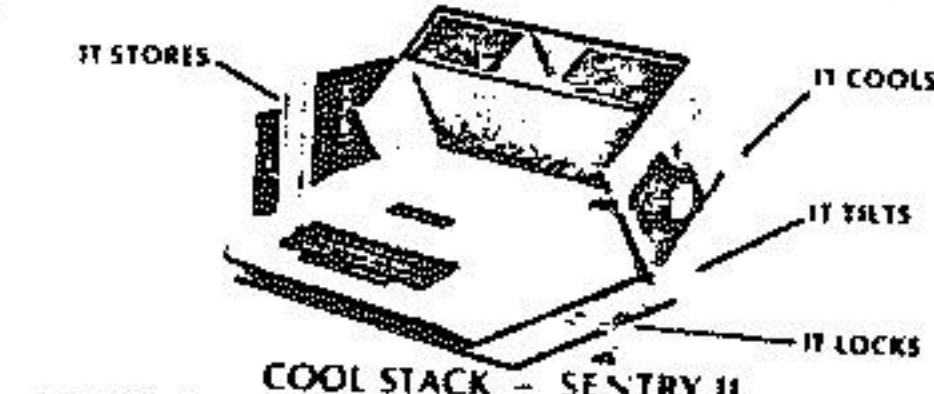
## COOL STACK FOR THE APPLE II - IIE



The COOL STACK Sentry II offers the features: cooling, easy tilt action access, and efficient on and storage for the APPLE II computer system, all in a compact unit. The precision all steel construction is for optimum strength and durability. An attractive finish is color matched to the Apple II. Fast simple installation saves you time and money.

**IT LOCKS**  
The Apple II computer is easily fastened securely plate utilizing existing holes in the Apple mainframe eliminating any modification or permanent fastening to the middle shelf of the COOL STACK utilizing holes in the bottom of the drives. An adhesive plate is attached to a table top with adhesive providing quality lock easily snaps in place to secure the unit. The Sentry II can be easily attached or removed without adhesion plate only when the system is unlocked.

**IT COOLS**  
The cooling effectiveness of the COOL STACK is to overheating usually resulting from added functions in the Apple II computer. The COOL STACK greatly improves the life and reliability of the computer and peripheral boards.  
Fresh air is forced into the computer and blows components through a foam enclosure surrounding slot area. The hot air is forced out through the top on the opposite side, the back and bottom of the unit and the keyboard. A high quality low noise fan is was engineered and tested to get the job done.



**IT TILTS**  
The COOL STACK can be easily tilted away from the Apple II computer allowing easy access to the inside of the computer plug-in cards.

**IT STORES**  
Another much enjoyed feature of COOL STACK is the efficient and attractive organization it offers for the typical Apple II. Either one or two disk drives can be stored on the shelf. The COOL STACK, being constructed of 16 gauge steel, also An adjustable library rack provides convenient storage for manuals and disks.



**COOL STACK STANDARD**  
For those who do not need the extra security and transient easy access to the computer, the COOL STACK standard unit is ideal. It includes a security lock and optional Power Sentry.



**POWER SENTRY**  
A lock-out switch with transient suppression controlled by a lock-out switch. Separate rocker switch to RE-BOOT the Apple. Includes security bracket to prevent removal of plug, deterring theft of monitor and printer.



**DISK LOCK**  
The DISK LOCK prevents unauthorized access to the Apple II disk drive. DISK LOCK on the disk drive alone or with the COOL STACK utilizing existing holes in disk case movable in both the locked and unlocked.

# DESKTOP CABINETS

## \*\* DOSS INDUSTRIES

1631	APPLECENTER 10 CABINET W/LOCK	180	174
1632	APPLECENTER 10S-CABINET ONLY	170	165
1630	APPLECENTER 12 CABINET-FAN & LOK	240	221

## \*\* FMJ

1783	COOL STACK-CABINET	50	39
1782	COOL STACK-CABINET & FAN	86	63
1787	DISKLOK FOR STANDARD DRIVE	18	16
1785	FAN KIT	36	33
1786	LIBRARY RACK-SPECIFY SII OR CS	7	7
1784	POWER SENTRY-4 SOCKETS/LOK/SW	70	67
1780	SENTRY II-CABINET	139	114
1781	SENTRY II-CABINET & FAN	175	140
1779	SENTRY II-CABINET/FAN/PHR/LOKS	268	218

## \*\* TRACE SYSTEMS

3192	CABLE SECURITY KIT	39	31
3193	DISK II SECURITY KIT	25	20
3191	EXTENDER CABLE FOR DISK II	13	11
3190	FAN KIT	49	39
3189	STATION II	129	114

## \*\* RGB DESIGNS

3437	APPLE ORGANIZER	40	37
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# FURNITURE

NMBR N ITEM LIST AAA\$

## \*\* COMPUTER ACCESSORY

> HI-TECH SYSTEM  
> SPECIFY OAK, WALNUT OR PUTTY

1340	CRT TABLE HT2426 26x24x26.5	220	169
1341	CRT TABLE HT2434 34x24x26.5	230	177
1342	CRT TABLE HT2442 42x24x26.5	240	185
1343	CRT TABLE HT2450 50x24x26.5	260	200
1344	CRT TABLE HT3042 42x30x26.5	270	208
1345	CRT TABLE HT3050 50x30x26.5	285	219
1346	CRT TABLE HT3060 60x30x26.5	300	231
1334	PRINTER STAND HT12 26x12x26.5	170	131
1337	PRINTER STAND HT12BC 26x12x26.5	225	173
1335	PRINTER STAND HT18 26x18x26.5	220	169
1338	PRINTER STAND HT18BC 26x18x26.5	285	219
1336	PRINTER STAND HT24 26x24x26.5	240	185
1339	PRINTER STAND HT24BC 26x24x26.5	315	242
1347	WORK STATION HT1034 34x24x26.5	285	219
1378	WORK STATION HT1042 42x24x26.5	300	231
1379	WORK STATION HT1050 50x24x26.5	325	250
1380	WORK STATION HT1060 60x24x26.5	350	263
1381	^ELECTRONIC BAY HTEB 20.75x8H	50	40
1382	^PLEXIGLAS DOOR HTPL 20x7.5H	30	24

## \*\* COMPUTER ACCESSORY

> OAK SYSTEM

1392	MONITOR SHELF MS26 26x12x9	70	55
1397	MONITOR SHELF MS26X 26x12x13	75	59
1393	MONITOR SHELF MS34 34x12x9	80	63
1398	MONITOR SHELF MS34X 34x12x13	85	67
1394	MONITOR SHELF MS42 42x12x9	90	71
1399	MONITOR SHELF MS42X 42x12x13	95	75
1395	MONITOR SHELF MS50 50x12x9	100	78
1400	MONITOR SHELF MS50X 50x12x13	110	86
1396	MONITOR SHELF MS60 60x12x9	110	86
1401	MONITOR SHELF MS60X 60x12x13	120	94
1383	PRINTER STAND A012 26x12x26.5	190	146
1385	PRINTER STAND A012BC 26x12x26.5	255	196
1384	PRINTER STAND A018 26x18x26.5	250	192
1386	PRINTER STAND A018BC 26x18x26.5	315	242
1387	WORK STATION A026 26x27x26.5	240	185
1388	WORK STATION A034 34x27x26.5	270	208
1389	WORK STATION A042 42x27x26.5	320	246
1390	WORK STATION A050 50x27x26.5	360	270
1391	WORK STATION A060 60x27x26.5	400	300
1402	^ELECTRONICS BAY A0EB 20.75x8H	75	59
1403	^STATION RETURN ADRT 30x12x24	170	131

## \*\* KEENE PRODUCTS

> SPECIFY WALNUT OR OAK

1980	COMPUTERMATE L0146 37.75x51x31	199	175
1979	COMPUTERMATE L014x 49.75x51x31	209	179
1981	PRINTER STAND 24x30x27	119	98
1982	PRINTER STAND W/BASKET	149	128
1984	PRINTER STAND W/BASKET & SLOT	150	128
1983	PRINTER STAND W/SLOTTED TOP	120	99

## \*\* FURNITURE DIMENSIONS

ARE EXPRESSED AS W x D x H

## \*\* AMARO DESIGNS

> SPECIFY GLIDES OR CASTERS  
> SPECIFY OAK OR WALNUT

1076	PRINTER STAND 24x24	78	
1077	PRINTER STAND-UNFINISHED 24x24	61	
1072	WORK STATION 24x36, ADJ HEIGHT	269	
1074	WORK STATION 24x45, ADJ HEIGHT	294	
1073	WORK STATION-UNFINISHED 24x36	244	
1075	WORK STATION-UNFINISHED 24x45	258	

## \*\* ANADEX

1126	PRINTER STAND FOR 9500 SERIES	150	160
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## \*\* ATLANTIC CABINET

1251	BI LEVEL BL30	195	119
1250	BI LEVEL TOP BLT	30	19
1246	PERSONAL COMPUTER DESK PCD3B	165	102
1247	PERSONAL COMPUTER DESK PCD50	190	116
1257	PRINTER STAND HP30	220	134
1256	PRINTER STAND PS21	150	93
1259	ROLL A DRAWER RAD	295	180
1260	ROLL A STORE RAS	230	140
1249	SPLIT LEVEL SL50	290	177
1258	STORAGE STAND SS	70	44
1248	TILTING TABLE TOPPER TT22	37	24
1253	UNI LEVEL UL30	150	93
1252	UNI LEVEL UL50	220	134
1255	WORD PROCESSING STAND WPS	120	75
1254	^EXTENSION EX2B	100	63
1263	^HD CASTER SET C4	50	32
1262	^PAPER CASSETTE STORE PCS	10	8
1261	^WIRE PRINTER BASKET WPB	30	19

## \*\* BUSH

1308	DESK 28Hx45Wx29D CT130	240	150
1309	HUTCH 33Hx45Wx11D CT131	150	90
1307	PERSONAL COMPUTER CENTER CT101	130	94
1310	ROLL ABOUT TABLE 28Hx28Wx19D	130	78

## \*\* COMPUTER ACCESSORY

> BASIC SYSTEM - WALNUT ONLY

1409	MONITOR SHELF RZ24 22.5x12x9	35	28
1414	MONITOR SHELF RZ24X 22.5x12x13	40	32
1410	MONITOR SHELF RZ36 34.5x12x9	40	32
1415	MONITOR SHELF RZ36X 34.5x12x13	45	36
1411	MONITOR SHELF RZ48 46.5x12x9	50	40
1416	MONITOR SHELF RZ48X 46.5x12x13	55	44
1413	MONITOR SHELF RZ60 58.5x12x9	60	48
1417	MONITOR SHELF RZ60X 58.5x12x13	65	52
1408	PRINTER STAND SF100 24x12x24	75	59
1407	PRINTER STAND UV18 24x18x25	110	86
1405	WORK STATION CS36 36x24x26.5	115	90
1406	WORK STATION CS48 48x24x26.5	135	104
1412	WORK STATION CS60 60x24x26.5	155	119



# FURNITURE

NMBR N ITEM

LIST AAA#

## \*\* LIT-NING PRODUCTS

### > SPECIFY WALNUT OR OAK

2026	MICROSTATION 4208 48x30x26.5	349	262
2032	PRINTER STATION 4206 24x30x26.5	180	138
2033	PRINTER STATION 4207 30x30x26.5	210	162
2027	SHELF 30" 4321 9.5D	70	55
2028	SHELF 36" 4322	75	59
2029	SHELF 48" 4323	85	67
2030	SHELF 60" 4324	95	75
2034	^CASTER KIT	30	24
2031	^STORAGE BIN 4325 19x20x10.75	55	44

## \*\* MANNESMANN TALLY

2062	STAND W/OUTPUT STACKER	125	115
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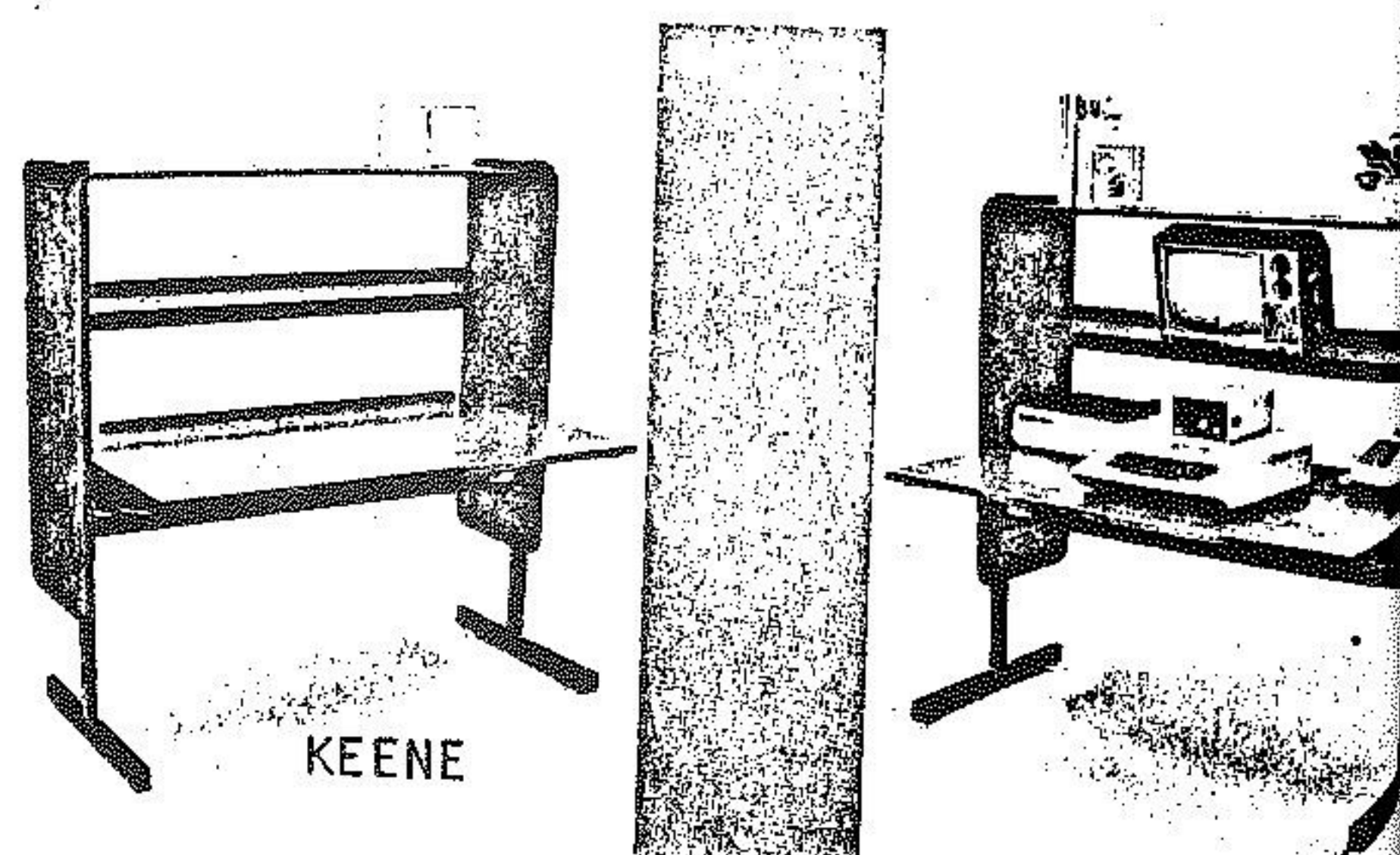
## \*\* O'SULLIVAN INDUSTRIES

2293	HOME COMPUTER TABLE CT707	130	91
2301	PRINTER STAND CT712	170	108
2303	PRINTER STAND CT722	170	108
2294	PRO COMPUTER TABLE CT709	165	112
2295	WORKCENTER CT710	140	88
2296	WORKCENTER CT711	150	97
2302	WORKCENTER CT721	170	108
2300	^CASTER KIT CT100	35	23
2298	^CORNER ADAPTER 45 DEG CT715	40	27
2305	^CORNER ADAPTER 45 DEG CT726	36	27
2297	^CORNER ADAPTER 90 DEG CT713	50	33
2304	^CORNER ADAPTER 90 DEG CT723	45	33
2307	^MONITOR PLATFORM CT725	25	16
2299	^STORAGE MODULE CT714	30	19
2306	^STORAGE MODULE CT725	35	23
1112	^STORAGE MODULE CT724 19x21x13	33	24
1115	^STORAGE MODULE W/DRAWER CT727	48	35

## \*\* RING KING VISIBLES

### > ALL NEUTRAL BEIGE

2736	BASE STATION D3024 x 26.5	170	109
2738	BASE STATION D3630 x 26.5	195	125
2739	BASE STATION D4380 x 26.5	240	154
2737	BASE STATION D4824 x 26.5	210	135
2741	BASE STATION D4830 x 29.5	255	163
2740	BASE STATION D6030 x 26.5	265	170
2742	BASE STATION D6030 x 29.5	280	179
2747	MOBILE CABINET D1618MC x 23	169	108
2746	MOBILE PEDESTAL D1618MP x 23	249	160
2744	PRINTER STAND D3024P x 26.5	180	115
2745	PRINTER STAND D3630P x 26.5	205	131
2743	STAND UP D3630S x 38.5	220	141
2756	TURNTABLE D2016TT 20x16x1	40	27
2757	TURNTABLE D2420TT 24x20x1	50	33
2760	^CASTERS-DATA RACK D4CAST	20	14
2755	^CENTER DRAWER ADD ON	56	31
2763	^DATA CATCHER D1612DC	25	17
2761	^DATA HANGER-DATA RACK D16HS	4	4
2758	^DATA RACK ADD ON D33618A	110	72
2759	^DATA RACK D3618B	150	97
2762	^DATA TRANSPORT D1614DT	90	59
2752	^STATION CONNECTOR D3024ACL	70	47
2753	^STATION CONNECTOR D3024ACR	70	47
2749	^STATION CONNECTOR D3024CL	70	47
2750	^STATION CONNECTOR D3024CR	70	47
2751	^STATION CONNECTOR D3030AC	70	47
2748	^STATION CONNECTOR D3030C	70	47
2754	^STEP DOWN	15	11



Only color photos properly show off furniture! When you become interested in a furniture line, please write or phone for a copy of their color brochure

NMBR N ITEM

LIST AAA# NMBR N ITEM

## \*\* WALKER

### > ALL IN OAK

3338	DISK BOX LARGE DB08	58	
3337	DISK BOX SMALL DB04	45	
3339	DISK BOX SMALL W/GLAS LID DBII04	40	
3333	MICRO STAND 3 TIER CS03	60	
3334	MICRO STAND 3 TIER CS03S SWIVEL	70	
3336	PRINTER STAND-100 PS100	45	
3335	PRINTER STAND-80 PS80	40	

## \*\* WALSH & SIMMONS

### > SPECIFY WALNUT, OAK OR BIRCH

3317	DESK CT24 25x24x27	92	
3318	DESK CT36 37x24x27	108	
3319	DESK CT50 51x24x27	132	
3321	DESK W/SHELF CT24S 25x26x27	123	
3322	DESK W/SHELF CT36S 37x26x27	143	
3323	DESK W/SHELF CT50S 51x26x27	172	
3324	DOUBLE TOP SHELF S224 23.5x10	64	
3325	DOUBLE TOP SHELF S236 35.5x10	70	
3326	DOUBLE TOP SHELF S250 49.5x10	81	
3320	PRINTER STAND CP24 25x24x27	99	
3328	UNDERSHELF US24 23.5x10	45	
3329	UNDERSHELF US36 35.5x10	50	
3330	UNDERSHELF US50 49.5x10	56	
3327	UPRIGHT SIDE SHELF SS1 13x12	52	

## \*\* WALSH & SIMMONS

3332	> SPECIFY WALNUT, OAK OR BIRCH	165	108
3331	APARTMENT DESK WS24 25.5x14x27	132	86
	DESK W/SHELVES TR33 33x24x28.75		

## \*\* ADVANCED BUSINESS TECHNOLOGY

1047	BARWAND-DIGITAL	195	172
1054	BARWAND-HIRES	290	249
1048	BARWAND-SPARE TIP	9	7

## \*\* APPLE COMPUTER

1145	APPLE PADDLES-ORIGINAL TYPE	30	12
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## \*\* COMPUTEKNQUES

1418	ARCADE-DAPTER W/AUTO REPEAT	42	39
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## \*\* H&L ELECTRONICS

1800	GAME I/O EXTENDER	30	26
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## \*\* HAYES PRODUCTS

1829	MACH II JOYSTICK	40	32
1830	MACH III JOYSTICK	50	40

## \*\* KRAFT SYSTEMS

1989	JOYSTICK	65	48
1990	PADDLES	50	37

## \*\* PFENYAN KAPPA INTERNATIONAL

2522	KEY PADDLE	53	
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## \*\* SAMSON

2771	JOYSTICK	30	24
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## \*\* SCOOTER/OHM ELECTRONICS

2811	ZERO FORCE X-PORT 1 WAY	20	17
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## \*\* SIRIUS SOFTWARE

2825	JOYPORT	50	40
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# PADDLES & JOYSTICKS

NMBR N ITEM

LIST AAA#

## \*\* SOUTHERN CALIFORNIA RESEARCH

2923	PADDLE ADAPPLE 2 WAY	30	28
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## \*\* TECH DESIGNS

3140	PARADISE PORT	40	26
3139	ADAM & EVE JOYSTICK	60	44
3138	ADAM & EVE PADDLES	40	29

## \*\* TG PRODUCTS

3166	JOYSTICK	60	43
3168	SELECTAPORT-5 WAY	60	43
3165	PADDLES	40	29
3167	TRACKBALL	65	52

## \*\* TKC

3182	JOYSTICK II	50	51
3183	PADDLES	30	32

## \*\* VERSA COMPUTING

3249	EZ PORT	25	20
3250	EZ PORT II	35	28

## \*\* WICO

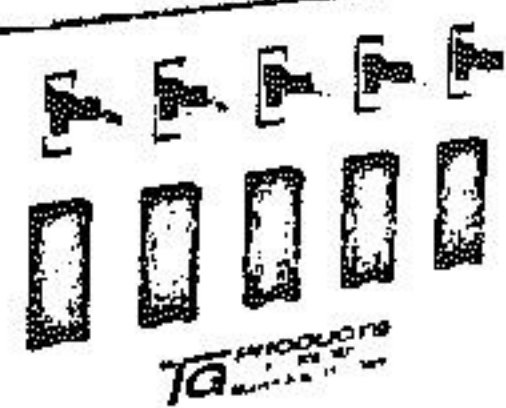
3376	ANALOG JOYSTICK	70	55
3377	APPLE MOUSE	180	138
3372	COMPUTER ADAPTER 724525	22	18
3374	EXT CORD 12' 151756	8	10
3375	EXT CORD 6' 151755	5	6
3370	JOYSTICK 159714 (REQ JA)	30	24
3378	JOYSTICK DELUXE 3 WAY 502010	60	48
3371	JOYSTICK FAMOUS 159730 (REQ JA)	35	27
3379	JOYSTICK POWER GRIP 502020	37	30
3373	APPLE TRACKBALL 724521	90	71

It's all Magic.



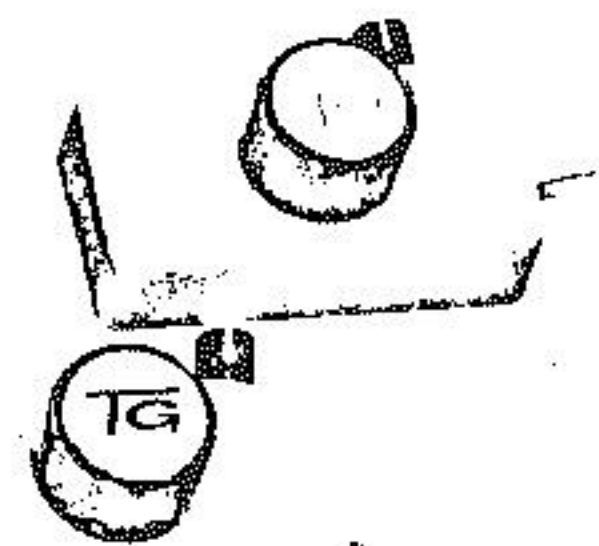
# PADDLES & JOYSTICKS SELECT-A-PORT

Provides switch selectable sockets to extend the flexibility of the APPLE's game port.



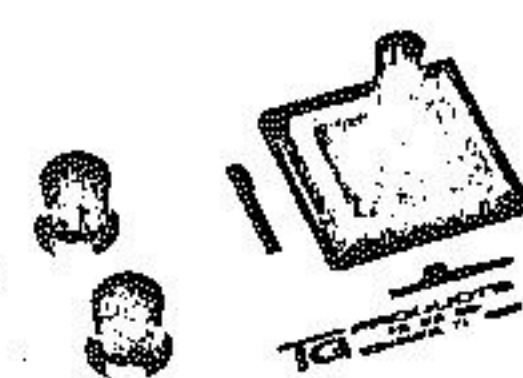
**TG PRODUCTS**  
P.O. Box 2981  
Riverside, CA 92509

- Large pushbuttons
- Highest industrial quality components throughout
- Fits conveniently in the hand
- Extra long 60 inch cords



- Plugs directly into the game socket
- Attractive case matches the color and texture of the Apple®
- May hang conveniently on either side of the Apple® or set flat on non-skid rubber feet
- 3 switch selectable sockets isolated by diodes to insure against device to device interference
- 1 switch selectable socket which automatically modifies the Joystick or paddles to operate as the second unit in dual Joystick games or four game paddle games
- Socket with no isolation for those special highly sensitive devices

- External trim adjustments to perfectly match the unit to your application and computer
- Self-centering on both axes (may be disabled)
- Two large pushbuttons
- Highest industrial quality components throughout
- Completely linear pure resistive circuit

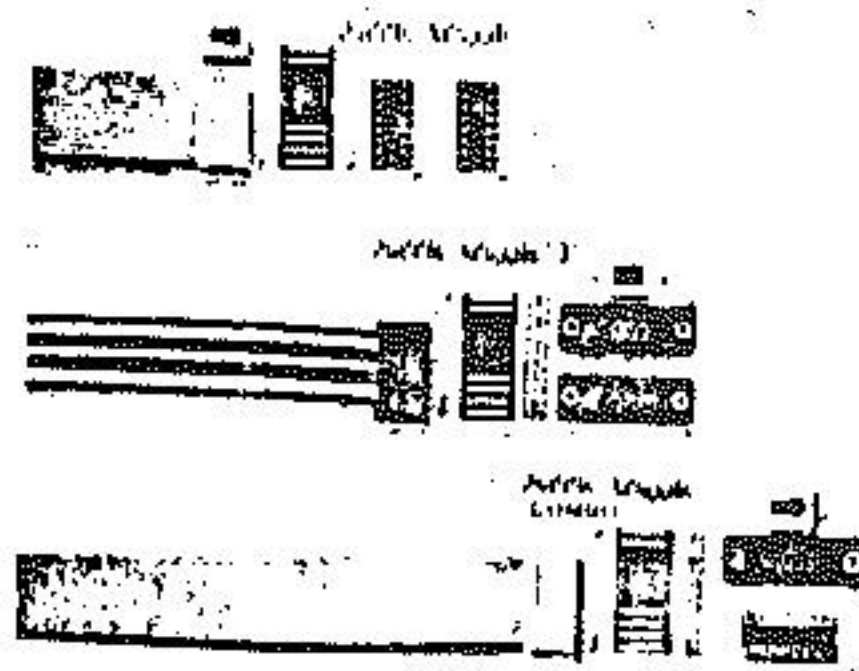


## GAME CONTROLLERS

## JOYSTICK

### Paddle-Adapple

I/O expansion adaptor  
For Apple II, II+, IIe and Franklin.

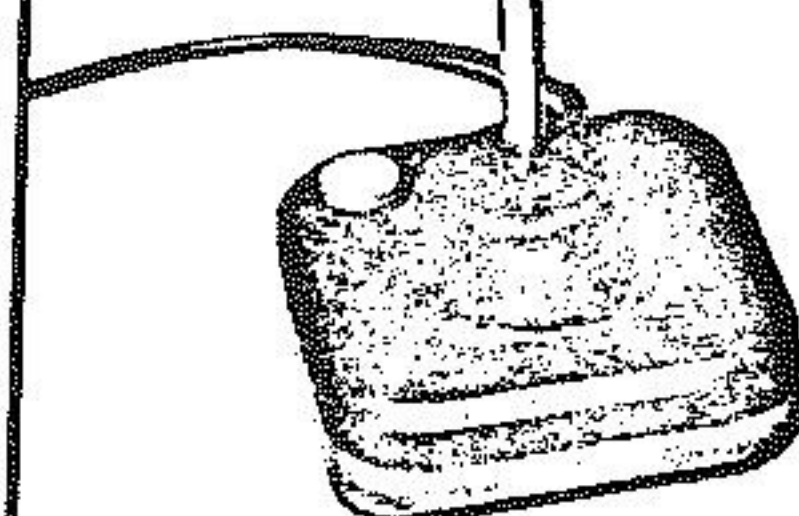


- The Paddle-Adapple has two 16 pin sockets.
- The Paddle-Adapple "D" works with the subminiature D connectors.
- The Paddle-Adapple Combo has one 16 pin socket and one subminiature D connector.
- Works with all Apple compatible joysticks, paddles and other I/O devices.
- Select one of two devices or...
- Use 4 paddles simultaneously.
- Unique "Jumpers" socket allows you to configure to meet your needs.
- BPI™ users can have BPI™ device and paddles plugged in simultaneously. (Paddle-Adapple and Paddle-Adapple Combo only).
- Gives you four push-button inputs.
- Supports shift key modification.
- Exchange X & Y joystick axis.
- Small and compact — adheres to computer with supplied foam tape.
- All Strobes, annunciators and power available on all 16 pin connectors.
- Supplied with 18" cable.

All three versions of the Paddle-Adapple plug into the interior game I/O and all designed to operate in two modes. In the first, it allows you to select between one of two devices, i.e., between paddle and joystick. They are chosen by the flip of a switch. In the second mode, the Paddle-Adapple takes advantage of the Apple's ability to handle up to four game controllers. The device plugged into socket A is treated as controllers 0 and 1. The other device is 2 and 3. In either mode the Paddle-Adapple can be configured to meet specific needs, such as exchanging X and Y axis, reassigning push button numbers, etc. It also allows the ability to have both devices run simultaneously. The Paddle-Adapple allows you to have the 4th push button.

\$29.95

### ARCADE ADAPTER



#### Arcade action for your keyboard input games!

- Now you can use the new arcade-quality Atari® compatible joysticks with your Apple® II computer! (WICOF Command Control™ pictured above.)
- No software drivers required. Works with all Apple® II games which use standard or user-definable keyboard formats. (Not just a select few games, as with other adapters.)
- Lightning-fast response as opposed to the sluggish play experienced with resistance type joysticks (which plug into the game I/O port).
- Incredible action with such games as Taxman™ (trademark HAL Labs), Frogger™ (trademark Sega Enterprises, Inc.), Apple Panic™ (trademark Broderbund Software), and Gorgon™ (trademark Sirius Software, Inc.)
- Auto-repeat function, using either the joystick or keyboard.
- For REV. 4 and newer Apple® II and II Plus computers.
- Satisfaction guaranteed or your money back.

Arcade-adapter™ \$41.95

Check, money order, VISA or MasterCard (provide card number, expiration date and signature). Shipping/handling included (U.S. only). Ohio residents add 5% sales tax.

Atari® is a trademark of Atari, Inc. Apple® is a trademark of Apple Computer Inc. WICOF® and Command Control™ are trademarks of WICOF Corp.

#### COMPUTECHNIQUES

P.O. Box 245 • Fairfield, OH 45014 • Phone: (513) 829-5052 (24 Hours)

## A/D LAB CARDS

NMBR N ITEM LIST AAA\$

### \*\* APPLIED ENGINEERING

1149 A/D 8 BIT/CHANNEL SYSTEM 129 116

### \*\* CALIFORNIA COMPUTER SYSTEMS

1316 A/D CONVERTER 7470-01 120 108

### \*\* INTERACTIVE STRUCTURES

1908 ANALOG INPUT SYSTEM AI02 299 261  
1909 ANALOG INPUT SYSTEM AI13 550 481  
1910 ANALOG OUTPUT SYSTEM AO03 195 176  
1911 DIGITAL I/O INTFACE DI09 330 289  
1913 ISOLATED DIGITAL INTFACE UI16 95 92  
1912 SIGNAL CONDITIONER SYSTEM SC14 44 41

### \*\* MOUNTAIN COMPUTER SYSTEMS

2155 A/D+D/A - NO CABLE 350 275  
2163 CABLE 6' CPS TO DB25P 25 22  
2164 CABLE 6' CPS TO DB25S 25 22  
2161 CABLES 3' AD/DA 50 43

### \*\* TECMAR PERSONAL COMPUTER PROD

3149 A/D BOARD W/TIMER TM-AD213 695  
3145 A/D CONVERTER BOARD TM-AD211 545  
3147 D/A COMPANION BOARD TM-DA103 140  
3146 D/A CONVERTER BOARD TM-DA101 295  
3148 STEPPER MOTOR CONTROLLER TMST100 495

## SLOT EXTENDERS

### \*\* CALIFORNIA COMPUTER SYSTEMS

1318 EXTENDER BOARD 7520-A 29 24

### \*\* LEGEND SYSTEMS

2011 SLOT B CARD 65 59  
2012 SLOT B EXTERNAL SWITCH 35 32  
2013 SOFT B CARD 85 68

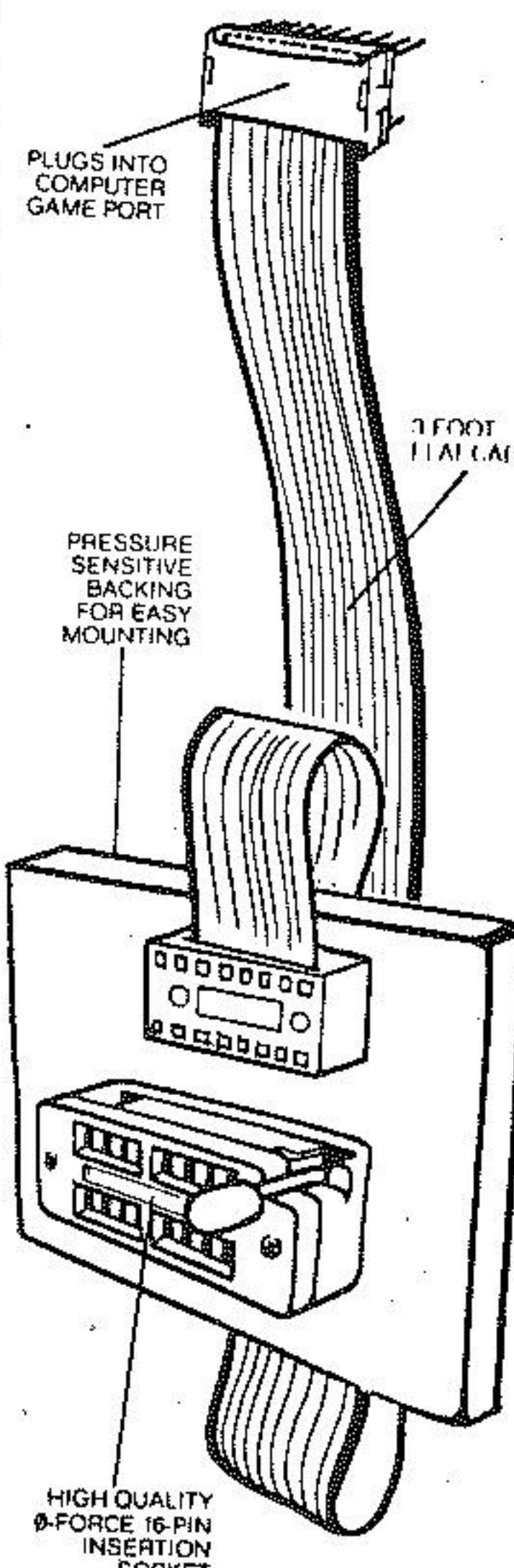
### \*\* SOUTHERN CALIFORNIA RESEARCH

2922 EXTEND A SLOT 35 33  
2920 SWITCH A SLOT EXTENDER CARD 180 161

## SCOOTER

High Grade Electronic Components

Let the  
0-Force  
be with you!



- Extends game port outside computer with 3-foot cable.
- Prolongs life of game accessories with 0-Force insertion socket.
- Mounts anywhere in seconds with pressure sensitive backing.
- Offers better performance and reliability with high grade components.

## COPY CARDS

NMBR N ITEM LIST AAA\$

### \*\* DARKSTAR SYSTEMS

1558 SNAPSHOT COPY CARD 130 101

### \*\* EASTSIDE SOFTWARE

1653 WILDCARD COPY CARD 140 112

### \*\* PIRATES HARBOR

2523 CRACK-SHOT COPY CARD 150 144

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### \*\* APPLIED ENGINEERING

1150 MUSIC SYNTHESIZER CARD 159 143

### \*\* MOUNTAIN COMPUTER SYSTEMS

2154 MUSIC SYSTEM W/DISK 395 306

### \*\* PASSPORT DESIGN

> ALSO SEE SOFTWARE SECTION  
2397 DIGITAL KEYBOARD FOR MUSIC SYS 795 686

## CPU CARDS

### \*\* METAMORPHIC SYSTEMS

2077 CP/M-86 OPERATING SYSTEM 225 202  
2076 METACARD 128K 1150 970  
2075 METACARD 64K 980 837  
2088 METACARD DATA TRNF KIT 100A 45 42  
2087 METACARD DATA TRNF KIT 100C 45 42  
2083 MS-DOS ASSEMBLER/LINKER 195 175  
2081 MS-DOS BASIC COMPILER 295 258  
2080 MS-DOS BASIC INTERPRETER 225 202  
2082 MS-DOS COBOL 595 514  
2079 MS-DOS FORTRAN 375 328  
2078 MS-DOS PASCAL 295 258  
2086 pSYSTEM ASSEMBLER/LINKER 195 175  
2085 pSYSTEM FORTRAN 375 328  
2084 pSYSTEM PASCAL 295 258

### \*\* PERSONAL COMPUTER PRODUCTS

2512 IBM 8088 CARD & APPLI-CARD 4 795 638  
2513 IBM 8088 CARD & APPLI-CARD 6 895 718  
2511 IBM 8088 CARD W/MSDOS-MBASIC 595 483



## CPU CARDS

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It's almost three in the morning. You knew just one more line of code and your program would be finished. That was seven hours ago. It's hard work developing good software. Writing it on the Apple II is no exception. Although we can't promise to get you to bed by eleven o'clock, we can make your job a lot easier.

When we developed MetaCard, a co-processor system for the Apple II, we designed in 128K bytes of on-board memory with parity. Enough memory to run the most powerful development tools available. We included memory expansion capabilities beyond 128K.

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MetaCard uses the Intel 8088 processor and operates at a full 5 Mhz. And MetaCard's real-time clock, external power supply, parity checking RAM, and power-up ROM diagnostics give you the features and reliability you demand.

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MetaCard, complete with documentation, MS-DOS and UCSD p-System (CP/M-86 optional) and power supply, is available in both 64 and 128K configurations, priced at \$980 and \$1,150 respectively. The MetaCard System Operating Manual is available for only \$25.

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MetaCard

### New 88 CARD™ turns your Apple into a 16 Bit Personal Computer

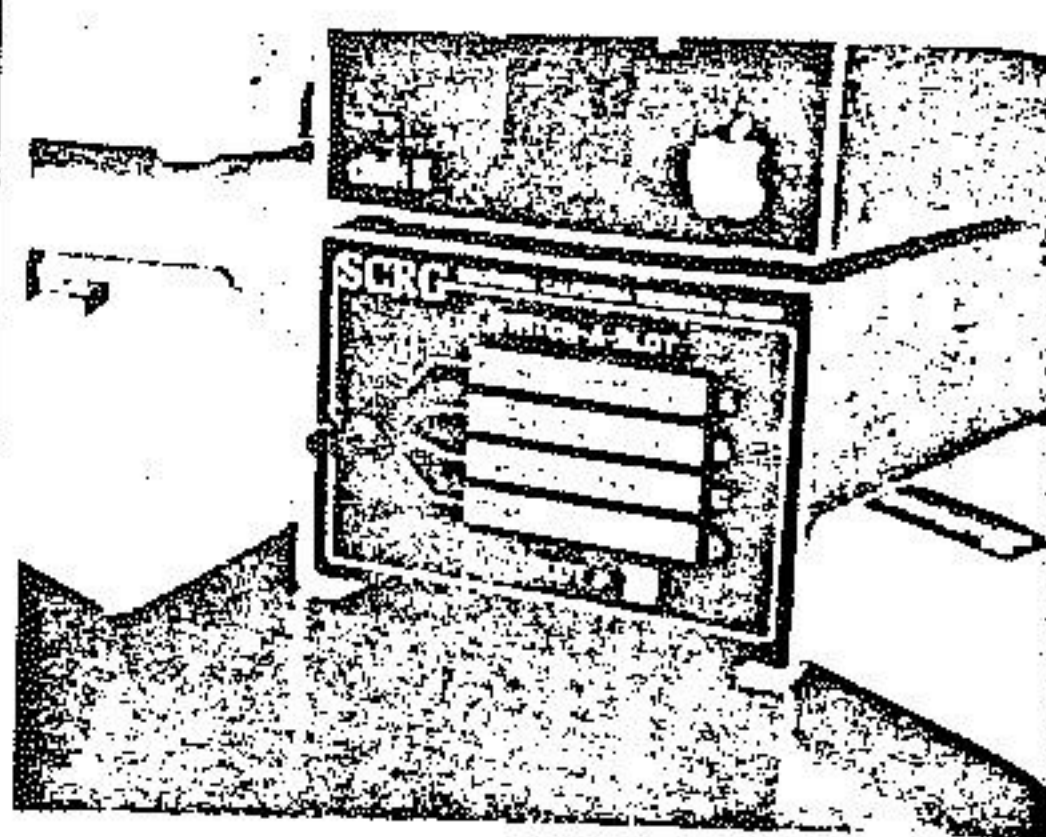
If you own or are about to buy an Apple II computer, you can also enjoy the latest in 16 bit software packages. The 88 CARD converts your Apple II into a 16 bit Personal Computer with the same operating system used in the IBM PC. Plus, the 88 CARD adds 64K bytes of memory to your system. This means that you can run larger application programs (MBASIC on the 88 CARD has over 62K bytes of free RAM area). Enjoy the best of both worlds. Run your existing Apple software and emulate the IBM Personal Computer with 16 bit software — all in one system with the new 88 CARD.

PCPI

my computer  
gets personal

## SWITCH-A-SLOT

FOR APPLE ][, ][+, ][e, ][//, and FRANKLIN



The SWITCH-A-SLOT is an expansion chassis, which allows the user to plug in up to four peripheral cards at one time. One of these cards is selected for use, and only that card draws power.

This product is especially useful where the software requires the printer to be in a particular slot, and the user wishes to choose between two or more printers.

- Allows up to four peripheral cards to be plugged into one peripheral slot.
- User selects desired card by front panel rotary switch.
- Only selected card draws power.
- Plugs into any peripheral slot.
- Saves wear and tear on delicate connectors.
- 18" cable connects Switch-a-slot to computer.
- Works with most peripheral cards.

#### SPECIFICATIONS:

- Power consumption: 5 ma from -5v supply (for L.E.D. indicator).
- Switched lines,  $\pm 5$  and  $\pm 12$  volts.
- Data, signal, and address lines are unbuffered.
- Size: 6 1/4" W x 4 1/4" H x 10" D.
- Chassis is made from heavy duty .062 aluminum.
- Accommodates cards up to 9 1/2" long.
- All connectors gold plated.

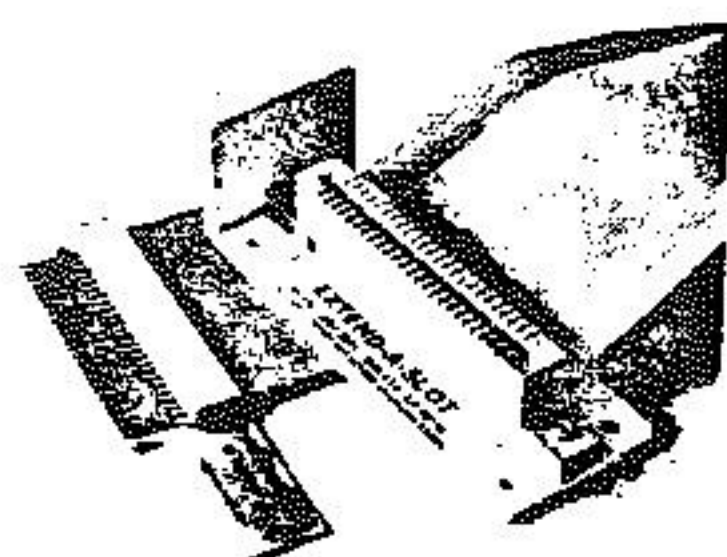
SOUTHERN CALIFORNIA RESEARCH GROUP  
Post Office Box 2231  
Goleta, CA 93118  
(805) 685-1931

## EXTEND-A-SLOT

FOR APPLE ][, ][+, ][e and ][//

The EXTEND-A-SLOT brings a slot outside your APPLE™, allowing an easy change of cards. The 18" flex cable is long enough to allow placement of the card in a convenient location. The high quality connectors are gold plated for reliability.

The EXTEND-A-SLOT works well with all slow to medium speed cards, such as Modems, Printers, Clock, Music, etc. It is not recommended for high speed data transfer devices such as disk drive controller cards.



#### EXTEND-A-SLOT

The perfect accessory for:

Owners of large numbers of I/O expansion cards—keep your frequently used cards installed. Use the EXTEND-A-SLOT for the others.

Technicians—easy access to test points on accessory cards under actual operating conditions.

Experimenters—make easy changes to cards while card is installed.

EASY TO USE—just plug it in as you would any expansion card, then plug your card in. When you want to change cards, do it easily outside the computer, without the wear and tear on the computer expansion slot.

## CP/M CARDS

### \*\* ADVANCED LOGIC SYSTEMS

1060	CP/M CARD, 64K & CP/M 3.0	399	300
1067	SMARTER I 80 COLUMN CARD	345	280
1061	SYNERGIZER-ZCARD/SMARTER/ADDRAM	750	544
1062	Z CARD II	169	130

### \*\* APPLIED ENGINEERING

1148	Z80 PLUS-CP/M CARD	139	125
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### \*\* COMPUTER DATA SYSTEMS

1345	U-Z80 CARD ONLY	195	122
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### \*\* DIGITEK INTERNATIONAL

1608	Z80 CP/M EXPANSION CARD	185	178
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### \*\* MICROSOFT PRODUCTS

2110	SOFTCARD	345	258
2111	SOFTCARD+VIDEOTERM	645	468
2112	SOFTCARD+VIDEOTERM+RAMCARD+	695	513

### \*\* MICROMAX SYSTEMS

2136	Z-MAX C/P/M CARD	180	141
2138	Z-MAX CP/M CARD & VIEWMAX 80 CD	350	267

### \*\* PERSONAL COMPUTER PRODUCTS

2507	APPLI-CARD 4 & 064K RAM EXTENDER	395	321
2508	APPLI-CARD 4 & 128K RAM EXTENDER	495	402
2514	APPLI-CARD 4 & MAX 80 COL CARD	620	388
2403	APPLI-CARD 4 MHZ CP/M-64K-70COL	295	246
2509	APPLI-CARD 6 & 064K RAM EXTENDER	495	402
2510	APPLI-CARD 6 & 128K RAM EXTENDER	595	483
2404	APPLI-CARD 6 MHZ CP/M-64K-70COL	375	304
2405	RAM EXTENDER 064K UPGRADE	195	175
2506	RAM EXTENDER 128K UPGRADE	295	258

## 80 COLUMN CARDS

### \*\* ADVANCED LOGIC SYSTEMS

1057	SMARTER II 80 COLUMN CARD	179	137
1058	SMARTER II ENHANCEMENT ROM	39	33

### \*\* DIGITEK INTERNATIONAL

1603	SCREENMASTER 80 COLUMN CARD	299	289
1604	SM 80/APPLEWRITER II PATCH	9	9
1605	SM 80/VISICALC PATCH	49	49

### \*\* M&R ENTERPRISES

2039	SUP'R TERM 80 COLUMN CARD	350	256
2040	SUP'R TERM 80 COLUMN CARD 50Hz	350	259

## 80 COLUMN CARDS

### \*\* MICROTEK

2122	MAGNUM 80 COLUMN CARD	269	137
2127	Q-PAC, MAG80/Q-DISC/V-E-EXPAND	699	563
2130	VIZ-E-EXPAND 80	100	57
2129	VIZ-E-EXPAND SOFTWARE	50	43
2123	VIZ-E-PAC, MB0/BAM128/V-E-EXPAND	650	313

### \*\* MICROMAX SYSTEMS

2133	VIEWMAX 80 COLUMN CARD	220	172
2139	VISICALC/APPLEWRITER II PATCH	70	56

### \*\* STB

2990	APPLE WRITER PATCH/STB 80 COL	30	24
2992	DOS TOOL KIT PATCH/STB 80 COL	30	24
2989	STB 80 COLUMN CARD	249	191
2996	SUPER/TEXT II PATCH/STB 80 COL	30	24

### \*\* VIDEX

3276	APPLEWRITER II PREBOOT/VIDEOTERM	19	15
3285	SOFTSWITCH 50 Hz FOR VIDEOTERM	35	30
3257	SOFTSWITCH FOR VIDEOTERM	35	30
3258	SWITCHPLATE FOR VIDEOTERM	19	16
3279	ULTRATERM 120 COLUMN CARD	379	308
3288	ULTRATERM FIRMWARE	29	26
3289	ULTRATERM MANUAL	19	19
3290	ULTRATERM STANDARD ROM	29	26
3281	ULTRATERM UTILITIES DISK	10	9
3287	VIDEOTERM & SOFTSWITCH 50Hz	309	251
3254	VIDEOTERM 80 COLUMN CARD	279	227
3255	VIDEOTERM 80 COLUMN CARD 50 Hz	279	233
3278	VIDEOTERM UTILITY DISK	37	30
3274	VIDEOTERM-7X12 LARGE CHAR ROM	29	25
3259	VIDEOTERM-APL ROM	29	25
3260	VIDEOTERM-ASCII STANDARD ROM	29	25
3261	VIDEOTERM-FRENCH ROM	29	25
3262	VIDEOTERM-GERMAN ROM	29	25
3273	VIDEOTERM-GREEK/MATH SYMBOL ROM	29	25
3263	VIDEOTERM-HALF INTENSITY ROM	29	25
3264	VIDEOTERM-INVERSE STANDARD ROM	29	25
3265	VIDEOTERM-KATAKANA ROM	29	25
3267	VIDEOTERM-LINE DRAWING ROM	29	25
3266	VIDEOTERM-LOWER CASE ROM	29	25
3268	VIDEOTERM-MICROMODEM ROM	29	25
3269	VIDEOTERM-NORSK ROM	29	25
3283	VIDEOTERM-NORTH EUROPEAN ROM	29	25
3284	VIDEOTERM-RUSSIAN ROM	29	25
3270	VIDEOTERM-SMALL UPPER CASE ROM	29	25
3271	VIDEOTERM-SPANISH ROM	29	25
3272	VIDEOTERM-SUPER/SUB SCRIPT ROM	29	25
3256	VIDEOTERM/SOFTSWITCH/INV ROM	319	251
3275	VISICALC 80 PREBOOT/VIDEOTERM	50	39
3277	VISICALC 80/MEMORY EXP/VIDEOTERM	89	70

### \*\* VISTA COMPUTER

3305	VISION 80 COLUMN CARD	289	241
3306	VISION 80 COLUMN CARD 50Hz	289	241

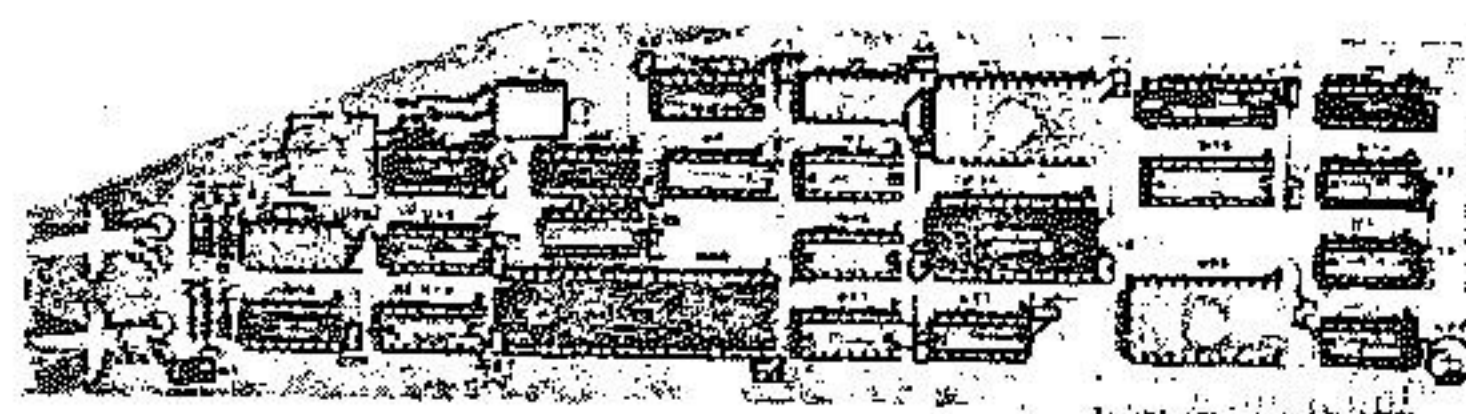
### \*\* WESPER MICRO SYSTEMS

3344	WIZARD 80 COLUMN CARD	249	173
3345	WIZARD 80 COLUMN CARD 50 Hz	249	173



## 80 COLUMN CARDS

### VIEWMAX-80



## THE RIGHT 80-COLUMN VIDEO CARD FOR YOUR APPLE II\*

It is more compatible with existing 80-column application software than other leading cards. And it is loaded with features. Check for yourself.

	RETAIL PRICE	7 X 9 CHAR DOT MATRIX	TRUE DESCENDERS	BUILT-IN SOFT VIDEO SWITCH	BUILT-IN INVERSE VIDEO CHAR.	FULLY PASCAL COMPATIBLE	SHIFT KEY SUPPORT
VIEWMAX-80	219	Yes	Yes	Yes	Yes	Yes	Yes
SMARTERM*	360	No	No	Yes	Yes	Yes	Yes
VIDEOTERM*	345	Yes	Yes	No	No	No	No
SUP'R TERM*	375	No	Yes	No	Yes	No	Yes
OMNIVISION*	295	No	No	No	Yes	No	Yes
VISION 80*	375	Yes	Yes	Yes	Yes	Yes	Yes
FULLVIEW 80*	379	Yes	Yes	Yes	Yes	Yes	Yes
WIZARD 80*	245	Yes	Yes	No	Yes	Yes	No

VIEWMAX-80 is functionally compatible with VIDEK's Videoterm and works easily with 80-column applications like CP/M, Pascal, WORDSTAR, AppleWriter II, Zardex, Easywriter, Letter Perfect, Magic Window, Apple PIE, VISICALC, ASCII EXPRESS, Transend, dBASE II, micromodem II, multiplan, etc.

Shift Key Mod and Preboot disk for Visicalc and AppleWriter II available as low cost options. See your local Dealer or order direct. Visa/MasterCard accepted. Dealer & OEM inquiries welcome.

**BACKED BY A FULL 2-YEAR WARRANTY.**

### micromax systems

6868 nancy ridge dr.  
san diego, ca 92121  
(619) 457-3131

Also, Apple Parallel Printer Card; \$89.95  
Apple 40-Column Upper/Lowercase Adapter; \$29.95  
Z-80 CP/M Card; \$179.95

The SCREENMASTER 80 Column Card is the most sophisticated video display expander card available for the Apple II and II plus micro computers. Besides giving the Apple II and II plus the increased display of 80 columns the SCREENMASTER 80 has the following advance "State of the Art" features:

★ Designed to provide full typewriter emulation, making it especially useful in Word Processing as well as graphics/text display.

★ Fully compatible with all Apple languages, Basic, Pascal, CP/M and Fortran. Digitek has software available for the running of Applewriter II and Visicalc in 80 columns.

★ Natural typewriter-like "Shift" and "Shift Lock" (signified when in use by a shift lock indicator LED light), by the simple installation of the Digitek Keyboard Modification.

★ Eight operator modes are provided under keyboard control giving fast program editing, as well as mode switching between the Apple's normal 40 column x 24 lines, and the SCREENMASTER's 80 column x 24 line format.

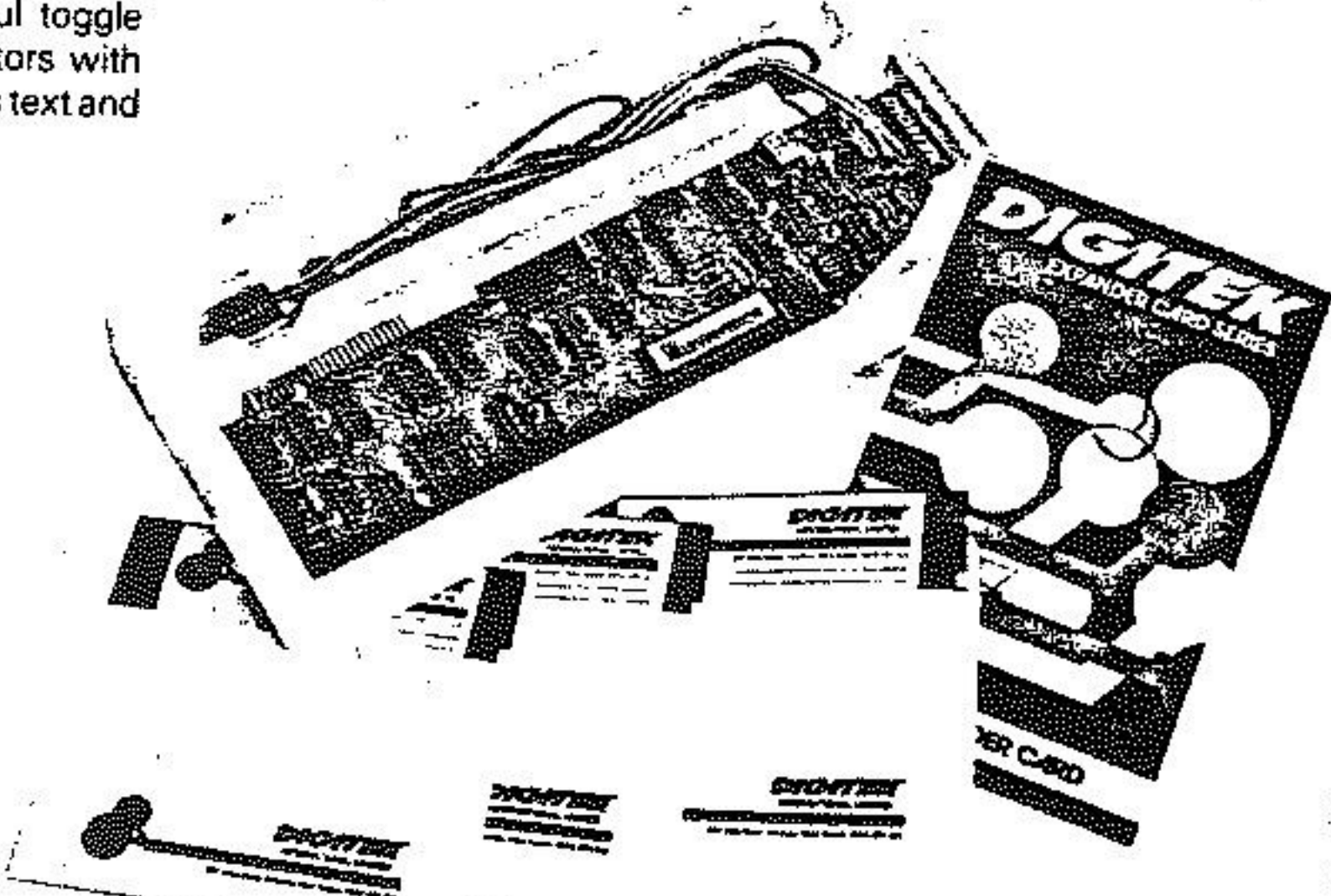
★ Split screen mode is also provided along with six different cursor modes, 3 scrolling speeds and a useful toggle "video source command" for one or two monitors with completely independent screen displays (such as text and graphics).

★ The SCREENMASTER 80 has 256 keyboard characters available (128 normal character set and 128 alternate character set, including user definable graphics), all based on Upper and Lower case (9 x 10 dot matrix) characters with full 3 dot descenders.

★ Supports all Applesoft command whether in 80 x 24 mode or 40 x 24 mode including black and white and colour graphics and display commands for Apple Hi-Res and Lo-Res graphics in both Inverse and Normal.

★ Direct Memory Access(DMA) for advance program applications.

★ Buffered address lines and buffered data inputs and outputs are provided for reliability and minimal loading of the Apple Bus.



### DISK WEAR LIFE

Wear life for most disk certified to exceed ten passes. Let's assume "passes" means revolutions. If you put the same disk into a disk drive day and let it spin 1000 times it's expected to last 27 years. It doesn't really work out that way. We have seen a well used disk drive that has been worn sufficiently to see light through the mylar, far, far less than 3 years.

### DOUBLE DENSITY DISKS

Some disks are labeled "double density" which some folks interpret to mean the disk is thicker, thus better than other disks. so! Double density means more data but ONLY if your drive read/write head is built to do it. Apple Disk II drives not made to write to double density disks, however, Apple Disk drives will work well with double density disks, but why spend extra money on capability the disk can't fully use? However, there is something to be said for the fact that double density disks do hold lots of data with dropout.

### KEEP YOUR COMPUTER COOL

The cooling fan is the answer. Overheating usually resulting from added function cards. A fan greatly increases the life expectancy of the computer function cards, chips and plugs. Fresh air is forced to the computer and blows across the components. Hot air is forced out through open slots on the sides, the bottom and the keyboard.

Hot air is forced out through open slots on the sides, the bottom and the keyboard. tests have recorded temperature reduction of certain cards of 48 degrees F using a fan! The expectancy of semiconductor doubles for every 22 degrees reduction in temperature, but their reliability greatly increased. Many mysterious problems will disappear when you cool your computer.

Continued on Page 51.

Continued from Page 50.

### IN SMOKE?

A wide range of equipment problems can be traced to power line surges, spikes, and interference. Many equipment interactions. Every home office that contains delicate electronic equipment is affected. Imaging power line surges/spikes without warning, ruining valuable equipment, rubbing out magnetic recordings. A combination isolator/power line filter, should be inserted between your Apple and the outside world. As a bonus the device may have its own heavy duty on/off switch so you may prevent wear on your Apple power supply on/off switch. Some add on fans advertise spike protection, but it offers minimal protection.

### CAUTION! BEWARE!

Do not place your monitor/TV on top of your disk drives without a metal shield between them! The powerful transformer in the bottom of most monitor/TV sets seriously affects the disk drive electronic components. Also, do not place your disk drives near the lower left side of your monitor as that is where the transformer is usually located.

### ANOTHER CAUTION! BEWARE!

If you have several peripherals to plug in to use with your computer power line or wall plug. Two wall plugs near each other could in fact be separately to your fuse box and the polarity of one could be the reverse of the other. A violent electrical accident could result.

### DISABLE "WRITE PROTECT"?

There is more than one way to disable the "write protect" switch on your disk drive(s) to allow you to use both sides of a disk. The usual way is to notch or cutout the opposite edge of each disk with a 1/4th inch hole punch or razor blade. Another way is to insert a wire jumper inside the disk drive.

Continued on Page 52.

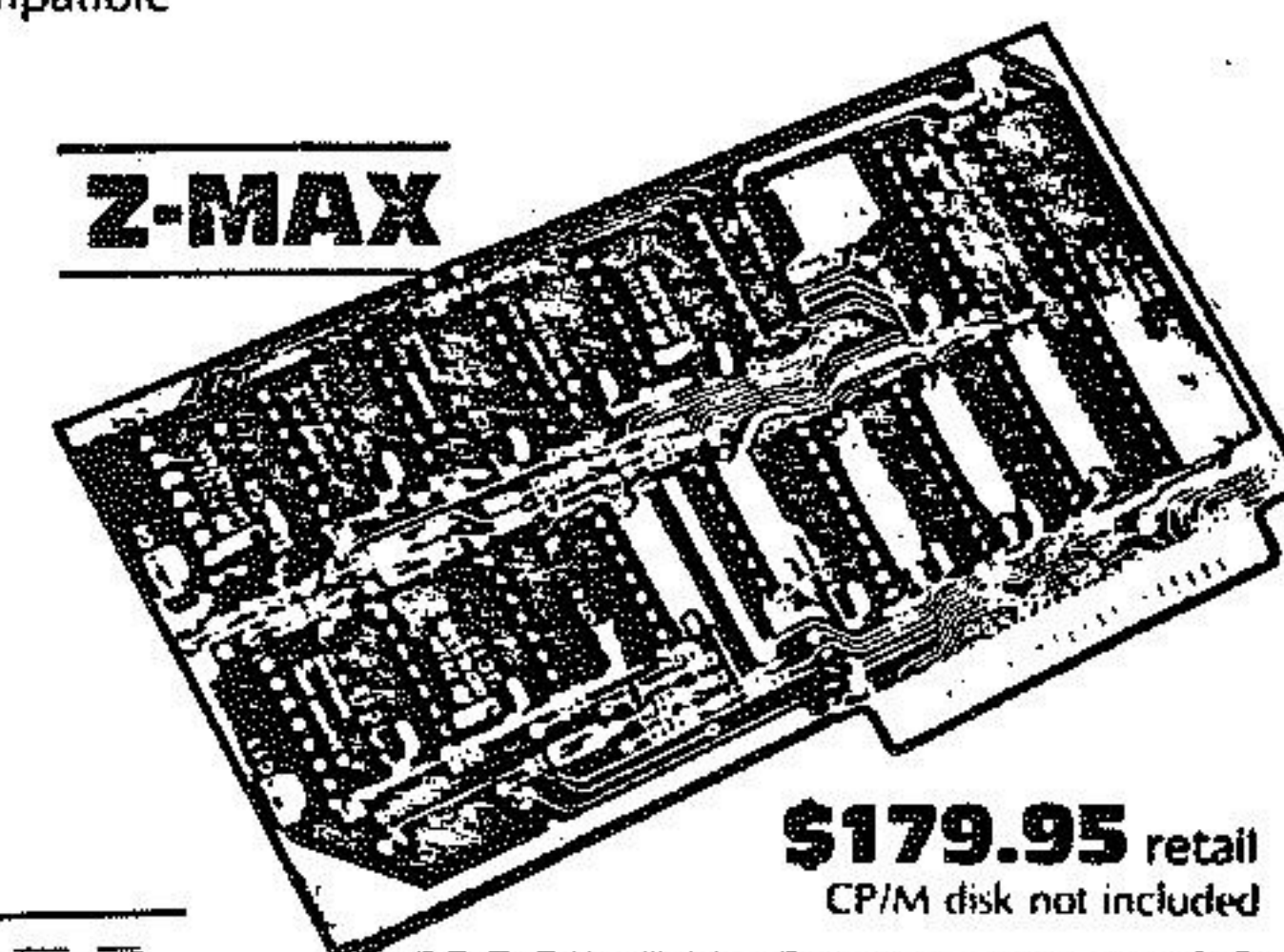
## CP/M CARDS

### Z-MAX

- Microsoft's Softcard and ALS's Z-Card Compatible
- Software Compatible with CP/M Operating System Application Packages
- Provides for Full Interrupt and DMA Operation
- Yellow Indicator LED for Z-80 Operation Mode
- Works with Apple IIe and Apple compatible computers (Franklin, etc.)
- 4-MHz Z-80 Operation

Available Soon:  
CP/M Operating System Disk with Manual

### Z-MAX

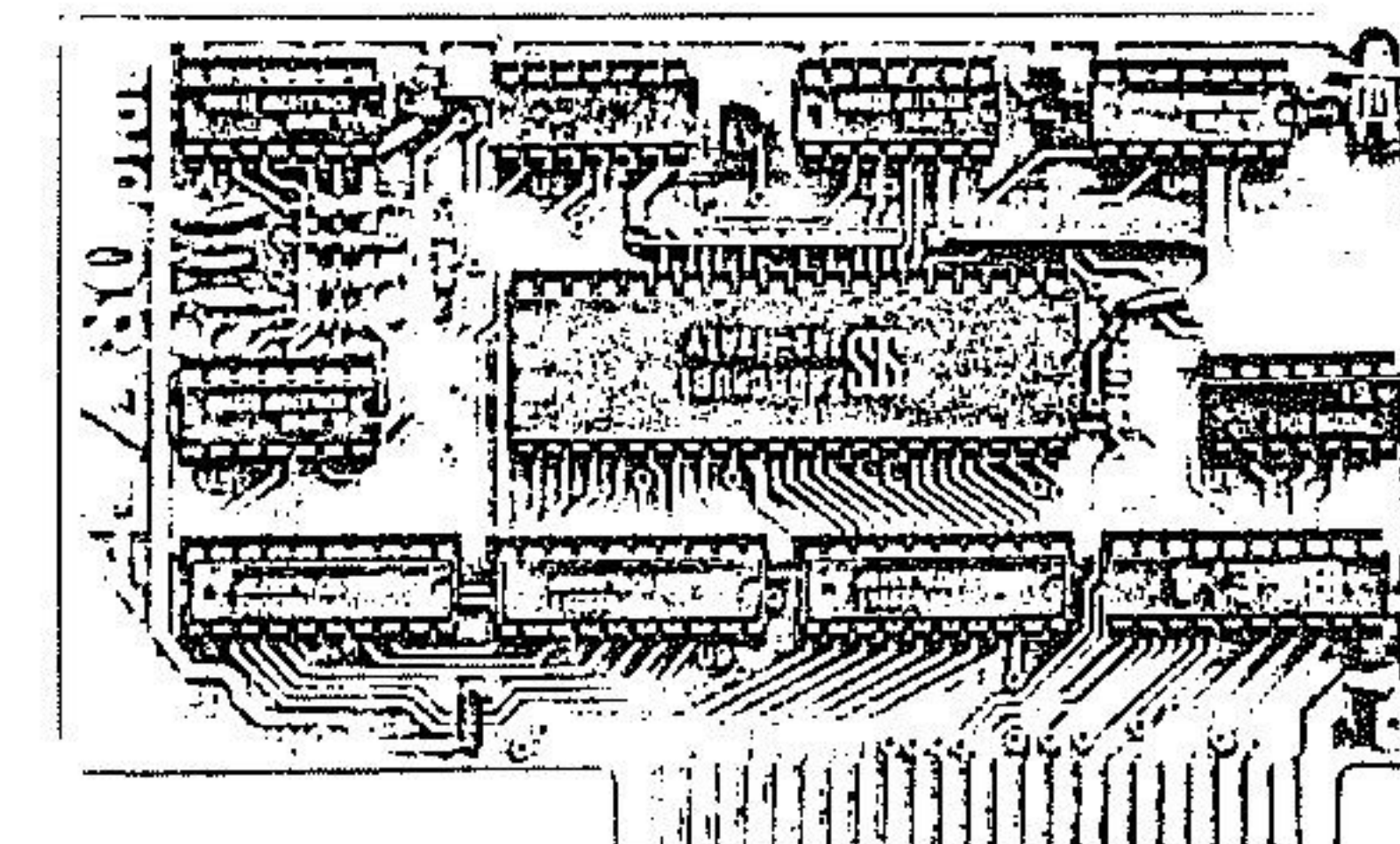


**\$179.95** retail  
CP/M disk not included

**MOST AFFORDABLE Z-80 CARD FOR CP/M OPERATION ON APPLE II SERIES**

**micromax**  
INNOVATORS IN MICRO-COMPUTER TECHNOLOGY

## Z-80 PLUS



- Totally compatible with all CP/M software.
- Executes the full Z-80, 8080 and 8085 instruction set.
- Fully compatible with Microsoft disks (no pre-boot required as with others).
- Does everything the other Z-80 cards do plus supports Z-80 interrupts.
- An on-card ROM eliminates many I.C.'s for a cooler, less power consuming board.
- Runs on any Apple II, II+ or IIe with at least 48K memory (80 column card is not required).
- The Z-80 Plus will allow you to run: dBase II, Wordstar, Spell Star, Cobol-80, Fortran-80, Peachtree and all other CP/M based software.
- Fast Clock: 3.57 MHz
- Complete documentation included (user must furnish software).
- High quality P.C. board, gold plated connector, all I.C.'s in high quality sockets, with mil. spec. components used throughout.
- Two year warranty.

APPLIED ENGINEERING



# MULTI FUNCTION CARDS

NMBR N ITEM

LIST AAA#

## \*\* CALIFORNIA COMPUTER SYSTEMS

1319	ASYNCHRONOUS SERIAL CARD 7710-01	135	121
1329	ROM PAC FOR 7710 7610C	30	28

## \*\* INTRA COMPUTER

1933	AB 232/12 SWITCH	120	108
1934	AB 232/24 SWITCH	150	135
1935	AB 449/37 SWITCH	190	171
1936	AB DP/50 SWITCH	240	215
1937	AB VIDEO/BNC SWITCH	100	91
1947	CROSS OVER 232/12 SWITCH	180	162
1944	DUAL AB 232/12 SWITCH	220	197
1945	DUAL AB 232/24 SWITCH	270	242
1946	DUAL AB VIDEO/BNC SWITCH	160	144
1940	SWITCH 42 232/12	210	188
1941	SWITCH 4W 232/24	240	215
1942	VIDEO/BNC SWITCH 4W	165	148

## \*\* MOUNTAIN COMPUTER SYSTEMS

2166	ADAPTER RS232 DB25 PIN RECONFIG	60	52
2162	CABLE 6' CPS TO CENTRONICS	25	22
2167	CABLE 6' CPS TO DB25S IDS	25	22
2165	CABLE 6' DB25P TO DB25F	25	22
2170	CABLE 6' DIABLO SERIAL TO DB25F	25	24
2169	CABLE 6' SERIAL TO DB25F	25	24
2168	CABLE 6' SERIAL TO DB25M	25	24
2157	CPS MULTIFUNCTION CARD	239	183
2172	CPS MULTIFUNCTION DISK CP/M	20	20
2171	CPS MULTIFUNCTION DISK PASCAL	20	20
2173	EXTERNAL CHARGER	12	11
2153	INTROL/X10 CONTROL CARD	200	167

## \*\* PROMETHEUS PRODUCTS

2583	BSR TRANSDUCER	25	22
2582	HOME CONTROLLER PAC	65	54
2595	PRO II S/L DISK	299	250
2594	PRO II S/L DISK W/APD-CNTR	425	338
2564	VERSACARD	199	159
2591	VERSACARD APPLICATIONS PAC	30	29
2570	VERSACARD GRAPHITTI ROM-APPLE	40	31
2569	VERSACARD GRAPHITTI ROM-EPSON	40	32
2571	VERSACARD GRAPHITTI ROM-IDS	40	32
2572	VERSACARD GRAPHITTI ROM-NEC/PRO	40	32
2573	VERSACARD GRAPHITTI ROM-OKIDATA	40	32
2592	VERSACARD HOME CONTROLLER APPLS	50	47
2593	VERSACARD SPECIAL PAC	249	200

NOTE: If you disable the write protect micro switch some protected programs will not work, for example PFS: Personal Filing System!

Continued on Page 55.

# CLOCK & TIMER CARD

NMBR N ITEM

LIST AAA#

## \*\* APPLIED ENGINEERING

1147	TIMEMASTER CLOCK CARD	129	1
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## \*\* CALIFORNIA COMPUTER SYSTEMS

1314	CALENDAR/CLOCK MODULE 7425-01	120	10
1315	PROGRAMMABLE TIMER 7440-01	120	10

## \*\* COMREX INTERNATIONAL

1425	TIMEPIECE CLOCK CARD	99	9
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## \*\* MICROCOMPUTER BUSINESS INDUST

2106	APPLETIME CLOCK CARD	99	7
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## \*\* MOUNTAIN COMPUTER SYSTEMS

2146	THE CLOCK	280	22
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## \*\* THUNDERWARE

3175	THUNDERCLOCK PLUS	150	13
3180	CP/M DISK & USER GUIDE	29	27
3177	DOS DATER DEMO DISK & GUIDE	29	27
3178	PASCAL DISK & USER GUIDE	29	27
3176	X-10 INTERFACE OPTION	49	49

## \*\* WEST SIDE ELECTRONICS

3369	SUPERCLOCK II	159	141
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Continued from Page 51.

The way we have adopted is simple to loosen and lower the microswitch inside the disk drive out of way....here's how:  
Insure your Apple is off!!! Remove the disk controller card. Remove the disk drive cover by removing four screws from its bottom side. (You need a Phillips screw driver.) Slide the cover off-carefully. Loosen the two screws holding microswitch in place. (You need Allen wrench for this.) The switch screws are located on left front side of the drive. It is facing you. The switch itself will swing down (about 1/16th inch is all it will move) it won't be used. Leave the screws loose. Replace the cover carefully.

Clock/Calendar  
Parallel Interface  
Serial Interface

The CPS MultiFunction card is really three cards in one. It provides all the capabilities of a real time clock/calendar, parallel interface, and serial interface, all on one card. It not only saves you money, but also only occupies one slot in your Apple II.

# CPS MultiFunction

Features and Specifications

## Features

- CPS is configured by our set up program which sets the parameters (such as baud rate, line feed, printer commands, etc.). Once you have configured your card, the information is stored in CMOS RAM with on-board battery backup, and need not be set up again for up to two years.
- You may also change parameters from the keyboard with control commands.
- On-board software features half-duplex terminal operation. It works directly with a modem to allow direct access to communication networks.
- Serial and parallel outputs may be used simultaneously.
- "Phantom Slot" capability permits assigning each of the functions of the CPS card to different slots in your Apple II without the card actually being in those slots.
- CPS's on-board intelligence lets it function in a wide variety of configurations, thereby providing software compatibility with most existing programs.
- Software is provided for use with DOS, CP/M, PASCAL.
- Control programs in the ROM reside in the CMOS RAM and are executed in the CPS card when the Apple II is in the "halt" state, when the control programs of most other peripheral cards typically occupy the 128K space.
- Ready-made cables are available for connecting to most peripheral devices.

## Applications

- A Clock—for date stamping reports and filing events.
- A Parallel interface—to connect a printer.
- A Serial interface—to connect a

## Specifications

- Clock/Calendar
  - One second resolution.
  - Crystal controlled, high accuracy clock.
  - Battery backed-up (2 years) with two AA standard alkaline batteries provided.
  - Provides seconds, minutes, hours, day or week, day of month, month, and year, in string format.
  - Leap year is automatically handled.
  - 24 hour military format or 12 hour with AM/PM format.
  - ±.001% accuracy.

## Parallel Interface

- Parallel functions permit the selection of the following features: auto-line feed, Apple tabbing, carriage delay after carriage return, lower to upper case conversion.
- Parallel Output Port
  - Centronics standard—reconfigurable to other standards such as IDS, Diablo, and many more.
  - 8 data lines.
  - ± strobe out jumper option.
  - ± acknowledge jumper option.
  - supports Apple's parallel printer cables.
  - definable status bit hand-shaking.

## Serial Interface

- Serial functions permit the selection of the following features: auto-line feed, terminal mode, Apple tabbing, return, local echo of output characters, simultaneous serial/parallel output, lower to upper case conversion, discarding of extraneous LF's from serial input.
- Uses the powerful 2851 serial Pro-

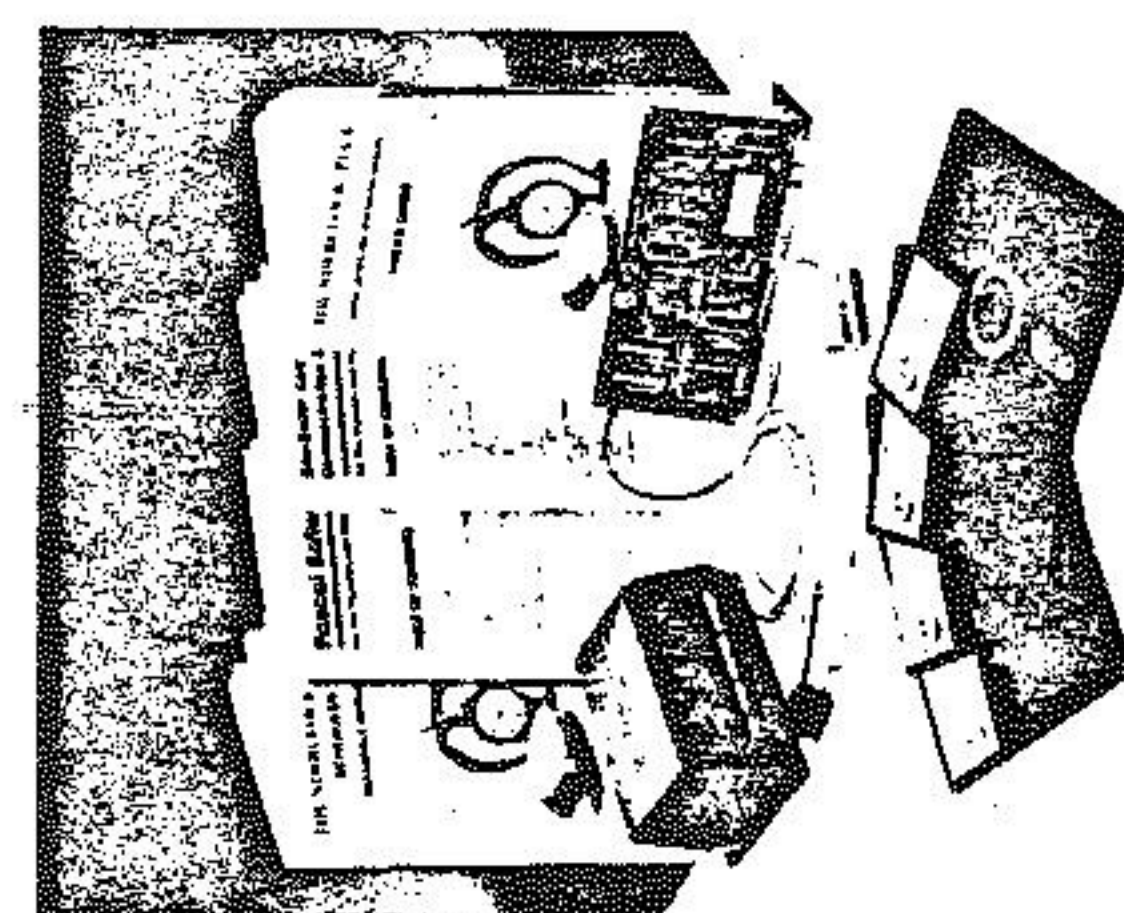
- programmable Communication Interface chip.
- 16 selectable internal baud rates from 50 to 19,200. On-board jacks for output and input (DC to 8M baud input).
- 5-8 bit character selection.
- Odd, even, or no parity selection.
- I/O interface conforms to RS-232C a) DTR, DSR, CTS, RTS, DCD, TXD, RXD.
- bj protective ground signal.
- Supports MCI 25-pin flat cable to DB25 type connector.
- Asynchronous features
  - 1, 1%, 2 stop bit format.
  - false start bit detection.
- Synchronous features
  - 1 or 2 synchronous characters.
  - transparent or nontransparent mode.
  - autosync or DLE-sync insertion.
  - sync or DLE stripping.
- Warranty
  - One year
- Items included:
  - CPS MultiFunction card, Diskette, Operating Manual.

## Optional Items:

- Six foot cables for connecting the following devices:
  - Parallel
    - Part #
    - 01-154-01 Modem—serial to DB25 male.
    - 01-154-02 Serial to DB25 female (pinout same as 01-154-01).
    - 01-213 DB25 male to DB25 male.
    - 01-265 DB25 female to DB25 female.
    - 01-264 Parallel to Centronics type connector for Epson/Centronics/IBM Data/CIT/OKI/Apple.
    - 01-265 IDS Printers—serial to DB25 female.
    - 01-266 Terminal, Printers, i.e. tractor, Epson serial to DB25.
    - 01-299 Diablo Terminal, Serial Printer, serial to DB25 female.

Chosen

So no matter how you use your APPLE now, the THUNDERCLOCK PLUS can add new dimensions to its usefulness. Chosen by APPLE and other professionals, the THUNDERCLOCK PLUS is the complete time and control system for your APPLE.

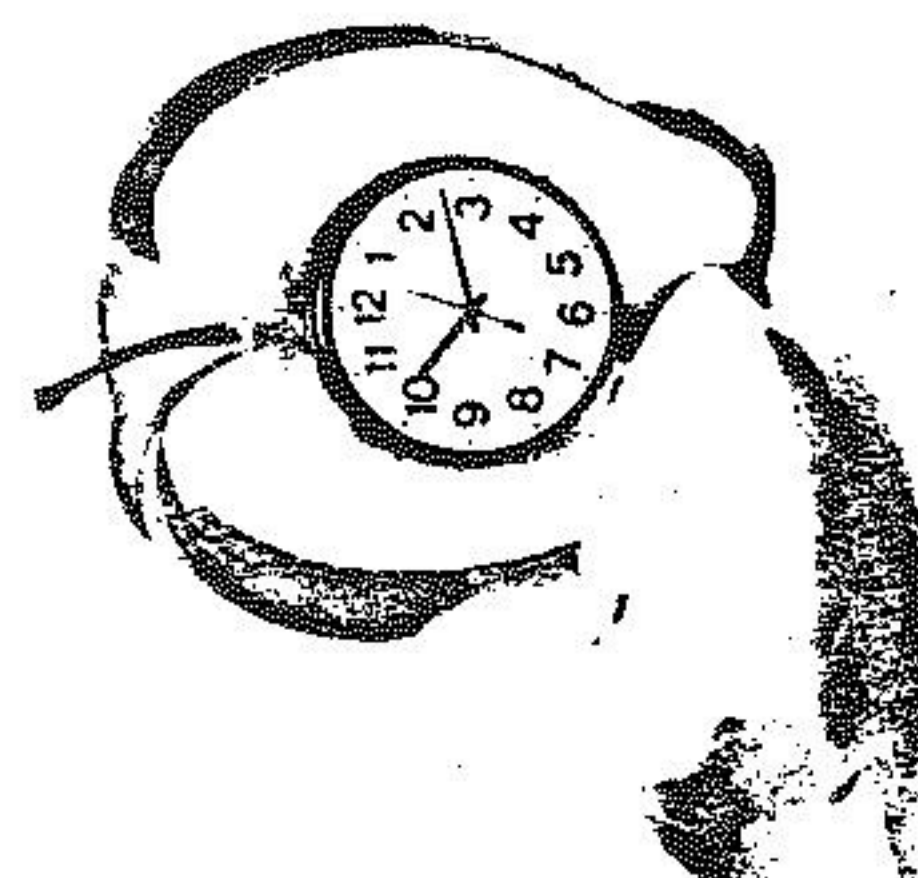


All these features, with proven reliability and a great price. See your APPLE Dealer, or contact us.

Countless OEMs and Software Developers have made the THUNDERCLOCK a part of their system because of its superior quality, reliability, and flexibility.

Put your APPLE to work...it's time!

**THUNDERWARE INCORPORATED**  
P.O. Box 13322 • Oakland, CA 94661 • (415) 652-1737  
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If you want to put your APPLE  
to work—around the clock—  
the THUNDERCLOCK PLUS is  
the solution. It's the complete  
clock/calendar and control  
system for your APPLE II.

THUNDERCLOCK PLUS™



## ROM CARDS & CHIPS

NMBR N ITEM LIST AAA\$

<b>** ANDROMEDA</b>		
1135	ROM CARD	80 53
<b>** APPARAT</b>		
1140	PROM BLASTER SYSTEM	119 109
<b>** CALIFORNIA COMPUTER SYSTEMS</b>		
1313	ROM/PROM MODULE 12K 6 WAY 7114A	115 104
<b>** DATA SHIFT</b>		
1561	MINI ROM CARD	30 28
<b>** HIGHLANDS COMPUTER SERVICES</b>		
1834	CRAE EROM 1, 2 & 3 PAC	100 84
1835	CRAE EROM 1-GLOBAL CHANGE/FIND	50
1836	CRAE EROM 2-AUTO NUMBER PLUS	35
1837	CRAE EROM 3-RENUMBER PLUS	35
<b>** HOLLISTER MICROSYSTEMS</b>		
1838	EPROM PROGRAMMER CARD 3264	395 350
<b>** MICROSEEDS</b>		
2109	MON+ ROM	50 40
<b>** MOUNTAIN COMPUTER SYSTEMS</b>		
2150	ROMPLUS COPY ROM	55 48
2151	ROMPLUS KEYBOARD FILTER ROM	55 48
2152	ROMPLUS TTL CONNECTOR	4 4
2148	ROMPLUS+ 6 WAY (NO ROMS INCL)	155 128
2149	ROMWRITER	175 146
<b>** MPC PERIPHERALS</b>		
2203	PROM IT EPROM DEVELOPMENT CARD	130 108
<b>** OMEGA MICROWARE</b>		
2347	INSPECTOR ROM CHIP	60 52
2346	WATSON ROM CHIP	50 43

NMBR N ITEM

LIST AAA\$

<b>** SOFT CTRL SYSTEMS</b>		
2843	APPLESOFT EDIT ROM	40
2842	APPLESOFT RENUMBER/MERGE ROM	40
2836	APPLESOFT UTILITY ROM	40
2844	BASICS ROM	40
2838	CATALOG COMMAND ROM	40
2837	DISK COPY ROM	40
2845	DUAL DOS ROMS	55
2840	FID ROM	40
2839	FORMAT ROM	50
2846	ROM BOARD & 1 \$40 ROM	30
2847	ROM BOARD & FORMAT ROM	40
2835	ROM BOARD 1 WAY (NO ROM INCL)	30
2841	SORT ROM	40
<b>** SYNERGISTIC SOFTWARE</b>		
3094	PROGRAM LINE EDITOR ROM	60
3095	SOFT SEVENTY ROM	70
<b>** HOLLISTER MICROSYSTEMS</b>		
1840	VOICE OUTPUT CARD 137 WORDS	295
1841	VOICE OUTPUT CARD 274 WORDS	345
<b>** INTEX MICRO SYSTEMS</b>		
1923	INTEX-TALKER	27
1926	INTEX-TALKER BOTH KITS	75
1924	INTEX-TALKER BUFFER KIT	50
1925	INTEX-TALKER EXP MEMORY KIT	50
<b>** MOUNTAIN COMPUTER SYSTEMS</b>		
2147	SUPERTALKER SD200	199 164
<b>** STREET ELECTRONICS</b>		
3013	ECHO II SPEECH SYNTHESIZER	150 129
3014	ECHO SPEECH SYNTHESIZER-Reg Printer cable & cable	300 254
<b>** SWEET MICRO SYSTEMS</b>		
3036	MICROBE	45 24
3035	MICROBE & THUNDERBOMBS DISK	65 30
3034	PAIR OF SPEAKERS	30 21
3032	SOUND II	129 107
3033	SOUND/SPEECH I	179 144
3031	SPEECH I	99 84
3037	THUNDERBOMBS	20 16

## SPEECH CARDS

Continued from Page 52.

HOW DOES DISK II WORK?  
Continued from "Disable Write Protect?". While you have the cover off your disk drive, operate the door knob several times and observe how the hubs clamp together. Also observe how the pressure pad comes down directly over the tiny glass eye read/write head. Take a good look at the tiny read/write head and decide for yourself if it is "dirty" and needs to be rubbed with a coarse lead cleaning disk. (Better, to use a very gentle and loving wipe with a cotton swab. Better yet, leave it alone!)  
While you are learning, insert a disk and open and close the door some more and see how the disk is handled and why it is important to CAREFULLY AND SLOWLY CLOSE THE DOOR whenever you have inserted a disk! Never snap it shut!  
You can learn some more while you have the cover off your disk drive. First make sure your Apple is OFF. Connect your disk drive to the controller card and re-insert in slot 6. Insert a system disk and watch how the read/write head and arm move during the boot process when you turn on your Apple. Insert a new blank disk and INIT it and watch the show inside the disk drive. Do it again and counting the "clicks" during INIT watch the arm move. Interesting? Now turn off your Apple and turn it on again and as soon as the disk is spinning open the drive door and you decide if it is okay to remove a disk while the disk drive is spinning. While it is spinning is Okay, but not while it is "writing"! Now, turn off your Apple and put the cover back on your disk drive.

Continued on Page 94.

## ROM BOARD SYSTEM

BECAUSE READ ONLY MEMORY WILL NEVER FORGET A FIRMWARE PROGRAM, IT WILL STILL BE THERE WHEN THE APPLE IS TURNED OFF AND ON AGAIN.

**FORMAT ROM SYSTEM \$64.95**  
Word processing capabilities for Applesoft print statements and versatile 'print using' commands.

**'FID' ROM SYSTEM \$59.95**  
The infamous 'FID' is now available at the touch of a key. A resident file transfer for all types of files including Text, Binary, R and S Files.

**APPLESOFT\* RENUMBER/MERGE ROM SYSTEM \$59.95**  
Renumber all or part of a program or merge two programs together.

**APPLESOFT\* EDITROM SYSTEM \$59.95**  
Easily and conveniently search, change, or remove any variable, string, or basic command in a program.

**ROM BOARD (WITHOUT A ROM) \$29.95**  
Has built in I/O and device select lines. Will accept 2716 EPROMS or 2316 ROMS.

**DISK COPY ROM SYSTEM \$59.95**  
Disk backup made easy and convenient.

**CATALOG COMMAND ROM SYSTEM \$59.95**  
One key control of disk files to delete, lock, run, load, etc. Also displays a map of a disk's used and unused sectors. Ideal for 'Hello' programs.

**APPLESOFT\* UTILITY ROM SYSTEM \$59.95**  
Contains the five most needed utilities. Auto line numbering, program list control, revive a lost program, alphabetize a catalog directory, and expunge DOS.

The ROM BOARD SYSTEM can be used in any slot to suit your system configuration and is activated with the standard 'PR#' command.

(Check or M.C.) Visa or MasterCard Accepted

SOFT CTRL SYSTEMS, BOX 599, WEST MILFORD, NJ 07480

201-728-8750

\*REGISTERED TRADEMARK  
ALL FIRMWARE IS COPYRIGHTED

## HMS3264™ 2716/32/32A/64/128 EPROM Programmer Card for Apple II\*

### General Description

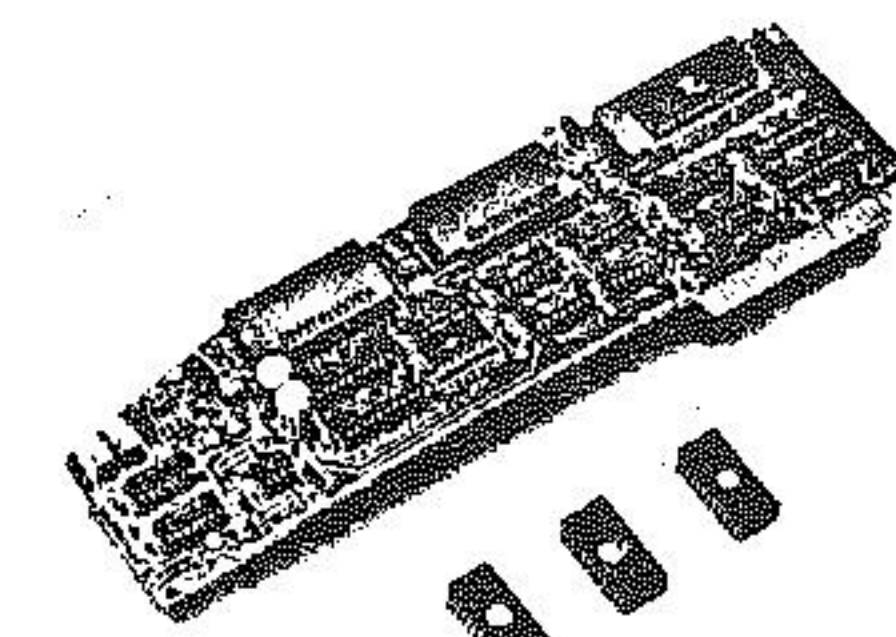
The HMS3264 EPROM Programmer Card is designed for use with the Apple II to program a variety of EPROM devices. The programmer card is enhanced by easy-to-use, menu-driven software and on-board circuitry that generates all required programming voltages. The card is designed to program Intel-compatible 2716, 2732, 2732A, 2764 and 27128 EPROMS.

The software is a user-friendly interactive program that allows EPROMS to be read and programmed from disk files and duplicated.

The software supplied with the HMS3264 is extremely flexible. It enables the user to program an entire EPROM from a binary file on disk, or to selectively and partially program an EPROM. Editing of one byte, or multiple bytes, is easily and rapidly accomplished. Verify-after-programming is performed automatically, but may be overridden if desired. Easy checksum calculation enables checksum to be included in EPROM by user to enhance user system integrity.

### Features

- Programs Intel-compatible 2716/32/32A/64/128 EPROM devices
- Uses Apple II address space \$C800-CFFF
- Automatic bank switching to accommodate the large EPROMS
- Relative addressing
- 'WORKSPACE' memory addressing enables easy, fast editing
- Completely menu-driven software
- Power ON/OFF switch (with LED indicator) on card enables EPROM insertion and removal without powering down your Apple II
- Programming voltage ON/OFF switch on card helps prevent inadvertent programming



- Prom-being-programmed LED indicator on card to help verify correct operation
- Can program entire EPROM space — no prohibited or unavailable areas

### Applications

- Functions as a very powerful, convenient-to-use, standalone (with Apple II) EPROM programmer
- With cross-assemblers and/or cross-compilers, becomes a very powerful but inexpensive software development system
- In-field editing of process control EPROMS
- Program EPROMS far away from master EPROM by error-free transfer of binary files using any popular telecommunications package for the Apple II. Enables fast and 100% accurate in-field EPROM programming.

HMS3264 — \$395

HMS Hollister Microsystems



# RAM CARDS

NMBR N ITEM LIST AAA\$

## \*\* ADVANCED LOGIC SYSTEMS

1059 ADDRAM 16K CARD 99 78

## \*\* AXLON

1274 RAMDISK 128K MEMORY SYSTEM 380 318  
1275 RAMDISK 320K MEMORY SYSTEM 1000 816

## \*\* COMPUTER TECHNOLOGY ASSOCIATE

1422 RAM CARD 16K 99 66

## \*\* DA COMPUTER PRODUCTS/CBE

1552 RAM CARD 16K 99 50

## \*\* DAYONG

1580 RAM CARD 16K - SUPER SPECIAL! 99 40

## \*\* LEGEND

2010 CP/M FASTDISK SOFTWARE 70 55  
2008 DISK EMULATION SOFTWARE 35 28  
2007 MEMORY MASTER SOFTWARE 35 28  
2009 PASCAL SOFTDISK EMULATOR 50 40  
2014 PASCAL SUPER SYS/MILL+128KDE 749 691  
2006 RAM CARD 64K 327 293  
2005 SOFT DISK 128KDE 599 425  
2015 SUPER EMULATOR SOFTWARE 60 48  
2016 VC-PLUS UPGRADE 40 OR 80 COL 27 27  
2017 VISICALC SUPER SYSTEM 850 768

## \*\* MICROSOFT PRODUCTS

2113 RAMCARD 16K 100 79

## \*\* MICROTEK

2118 BAM 016K RAM CARD & MMS DISK 160 78  
2126 BAM 064K RAM CARD 379 187  
2125 BAM 128K RAM CARD 479 236  
2121 Q-DISC 128K & VIZ-E-EXPAND 529 255

## \*\* MOUNTAIN COMPUTER SYSTEMS

2174 RAMPLUS & VISICALC EXPAND 100 84  
2158 RAMPLUS 16K CARD 189 135  
2159 RAMPLUS 32K CARD 219 154  
2160 RAMPLUS UPGRADE 16K 8 CHIPS 25 22

## \*\* MPC PERIPHERALS

2193 BUBBLE MEMORY 128K CARD 876 800  
2194 MEMORY BOARD 16K 99 66

NMBR N ITEM

LIST AAA\$

## \*\* OMEGA MICROWARE

2343 RAMEX 016K CARD 140  
2344 RAMEX 128K CARD 499  
2345 SUPER EXPANDER PLUS (VISICALC) 125

## \*\* PROMETHEUS PRODUCTS

2588 DISK EMULATOR-CP/M 50  
2586 DISK EMULATOR-DOS 3.3 50  
2587 DISK EMULATOR-PASCAL 50  
2576 EXPANDARAM 064K SPECIAL 299  
2574 EXPANDARAM 064K W/VC EXTENDER 399  
2577 EXPANDARAM 128K SPECIAL 399  
2575 EXPANDARAM 128K W/VC EXTENDER 499  
2590 RAM 128K/VC EX/GRAFFITI/ASUR/+ 944  
2578 RAM CARD 16K 99  
2589 VISICALC+VISICALC EXPAND 99

## \*\* QUENTIN RESEARCH

2624 RAM MEMORY 16K CARD 69  
2623 RAM MEMORY 16K W/O SOCKETS 59

## \*\* RH ELECTRONICS

2663 SUPER RAM II 16K 125

## \*\* SATURN SYSTEMS

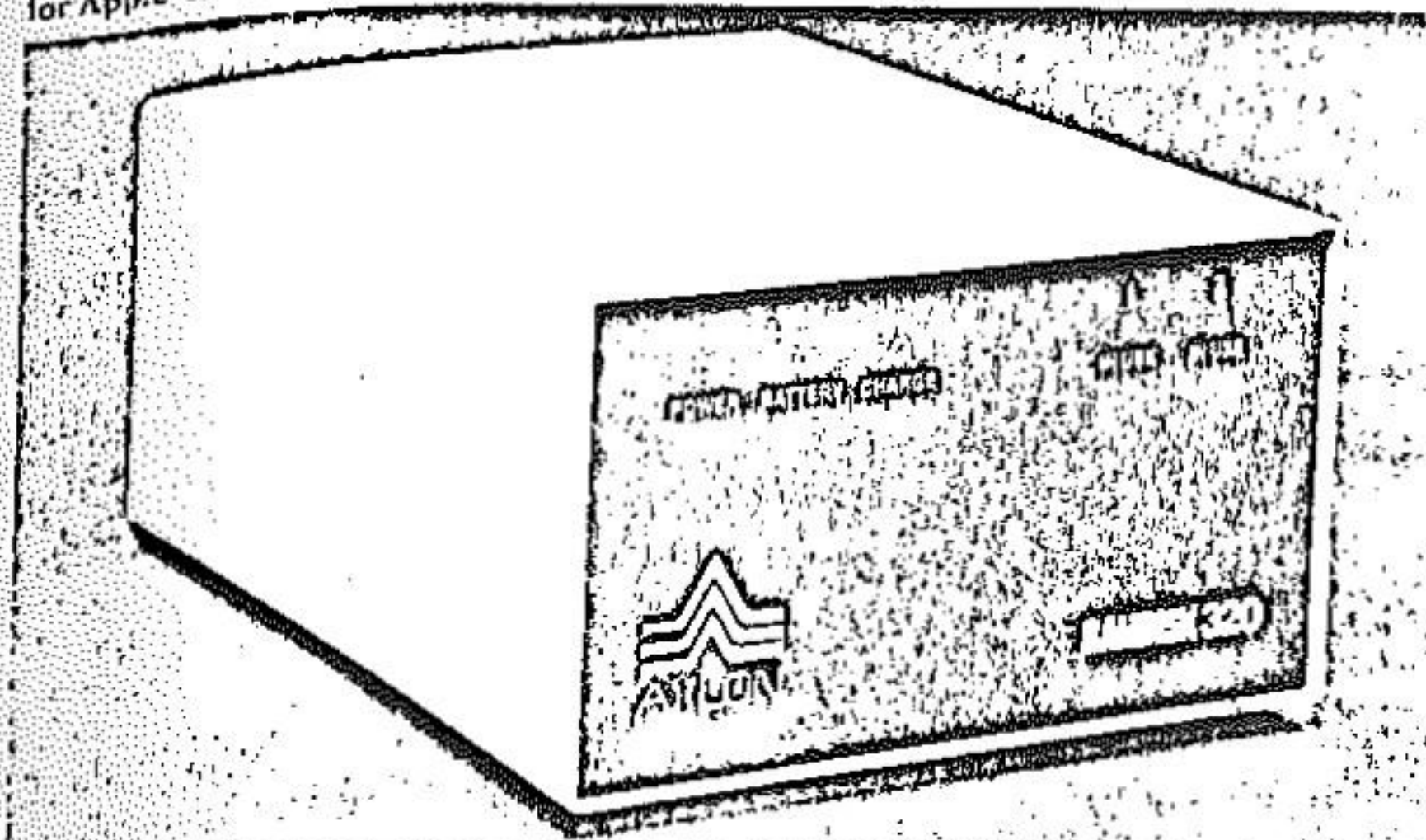
2803 ACCELERATOR II 599  
2802 CP/M OPTION 39  
2806 CP/M PSEUDO DISK FOR 32K CARD 39  
2801 PASCAL OPTION 39  
2805 PASCAL PSEUDO DISK FOR 32K CARD 39  
2797 RAM CARD 192K + 80 COLUMN 499  
2792 RAMBOARD 032K 219  
2793 RAMBOARD 064K 349  
2795 RAMBOARD 064K + 80 COLUMN 249  
2794 RAMBOARD 128K 499  
2796 RAMBOARD 128K + 80 COLUMN 399  
2804 UPGRADE 64K RAMBOARD TO 128K 150  
2798 VC EXPAND FOR xxK CARDS 69  
2799 VC EXPAND/80 FOR xxK CARDS 89  
2800 VC/80 FOR xxK CARDS 49

## \*\* SORRENTO VALLEY ASSOCIATES

2869 APP-L-CACHE RAM CARD 064K 350  
2870 APP-L-CACHE RAM CARD 128K 750  
2871 APP-L-CACHE RAM CARD 192K 975  
2860 APP-L-CACHE RAM CARD 256K 995  
2872 APP-L-CACHE RAM CARD UPGRADE 225

# RAMDISK 320™

320K solid state memory system for Apple II\* and III\*



- Gives your Apple\* computer the processing power and speed of much larger systems.
- 320K bytes of RAM (200ns) memory that functions like two 35 track, or two 40 track, or one 80 track floppy drive.
- Connect up to four RAMDISK 320 units for over 1.2 MByte of ultrafast memory.
- Ultrafast—up to 50 times faster than floppy drives, and 10 times faster than hard disk drives. Sorts 2 full disks in 15 seconds.
- Saves wear on floppy drives, and reduces the risk of lost data due to disk errors.
- Compatible with Apple\* DOS 3.3, SOS, CP/M\*, Apple\* Pascal 1.1, Pascal 4.0. User can boot directly from RAMDISK.
- Built-in power supply plus three hour battery backup. Draws no power from your Apple\* and retains data with Apple\* turned off.
- Increases telecommunication speed by receiving data into the RAMDISK 320 through the system and modem.
- Includes plug-in, slot-independent interface card.
- Includes specially designed operating system—plus software for diagnostic, fast load, copy routines, and business applications.
- Plug-compatible with Apple\* II\*, Apple\* III\*, Franklin ACE\*, BOSIS\*, BELL & HOWELL\*, and others.
- Applications OEM, business, education, scientific, software development, etc.



Axon, Inc.  
70 Daggett Drive  
San Jose, CA 95131  
(408) 730-0216

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CP/M is a trademark of Digital Research Corp.  
BELL & HOWELL is a trademark of Digital Research.

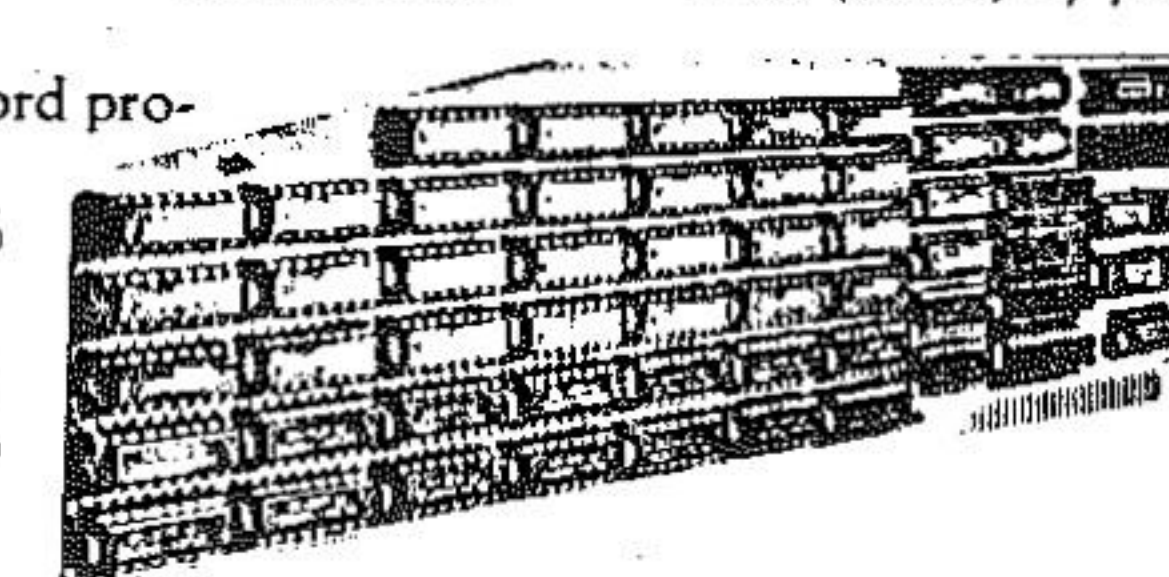
## THE SYNETIX SOLID STATE DISK EMULATOR FOR THE APPLE, INCREASES SPEED UP TO 1000%.

The Syntex Solid State Disk emulator operates identically to the standard disk drive, but responds much faster for programs using disk I/O. The SSD also saves wear on your mechanical drive and diskettes.

The Solid State Disk Emulator is compatible with DOS 3.3, Pascal, SofTech p-Systems IV.O, IV.I, and CP/M operating systems. Call us for a complete list of compatible software and benchmark results on aforementioned systems.

Database management, word processing and file manipulation programs can run up to 1000% faster.

A single board fits any slot and can respond as one or two



Contact your local dealer, or call:

Synetix Micro Products Inc.  
15128 N.E. 95th Street  
Redmond, WA 98052  
1-800-426-7412

Apple and Apple DOS are trademarks of Apple Computer, Inc. CP/M is a trademark of Digital Research.



## HARDWARE



32K RAM BOARD

### 32K RAM BOARD

The original multi-bank memory board for Apple II. Plugs into any slot. No jumper cable. Low power consumption. Uses high reliability, pretested 16K dynamic 200 ns RAM chips with 7-bit refresh.

Applications software is included to (1) relocate DOS into the memory board, (2) expand BASIC programs through chaining and overlaying, and (3) simulate a very fast, internal disk drive under DOS. Optional software can simulate a disk drive under CP/M or PASCAL.

VisiCalc users can add 32K to the workspace memory with this board and the VC-Expand or VC-Expand/80 software.

All Saturn boards can be used in combination with other Saturn boards or with standard 16K RAM boards. Saturn provides a one-year warranty with each board.

Saturn boards.



64K RAM BOARD

### 64K RAM BOARD

A medium-range memory board which can be expanded to 128K as your needs increase. Includes all the features of our 128K board. Upgrading is simple: just plug in 8 chips.



128K RAM BOARD

### 128K RAM BOARD

Our largest board includes 5 comprehensive software packages to assist in all your programming needs. Users of PASCAL, CP/M, and BASIC all gain additional speed and convenience of programming with the Saturn 128K Board. Plugs into any slot; no chip pulling required. Uses high reliability, pretested 64K dynamic 200ns RAM chips with 7-bit refresh. Low power consumption. One-year warranty.

All Saturn boards perform all the functions of a 16K Language card. In addition, Saturn boards can increase the workspace memory available to VisiCalc when used with the optional program VC-Expand or VC-Expand/80.

## SOFTWARE

### MOVEDOS

This program will automatically relocate DOS (3.3 or 3.2) into any of the Saturn boards, freeing up 10K of user memory. APPLESOFT\* or INTEGER BASIC can be loaded into the board at the same time as DOS, and both can access the relocated DOS. One can generate a turnkey system by using INIT to create a copy of the relocated DOS. This disk can later be booted, even from power up, automatically loading DOS into the Saturn board in one simple step.

Included with all Saturn boards.

### PSEUDO-DISKS

#### 1. PSEUDO-DISK FOR DOS

This software allows you to use one or more Saturn boards (to a maximum of 256K) like a standard disk drive, only faster and perhaps bigger. The software modifies DOS 3.2 or 3.3 to produce a single PSEUDO-DISK from any Saturn board(s).

Programs, data, etc. can be saved on the Saturn board by simply using the standard DOS commands for disk access and specifying the drive designation assigned to the PSEUDO-DISK.

This package is useful for maintaining ready access to commonly used programs, utilities, data, etc. Programs and data load significantly faster off the PSEUDO-DISK as compared to a physical disk drive.

Included with all Saturn boards.

#### 2. PSEUDO-DISK FOR PASCAL

This versatile software package allows you to use one or more Saturn boards (to a maximum of 256K) as another volume to PASCAL for storage of programs, utilities, data, etc. The PSEUDO-DISK eliminates the need for a second disk drive and improves the performance of the PASCAL operating system. With the PSEUDO-DISK you can speed up compilation and get almost instantaneous response from the editor and filer. A utility called FASTLOAD is included for uploading and downloading an entire diskette. Other utilities facilitate transfer of individual files between PSEUDO-DISK and real disk drive.

Included with all Saturn 64K and 128K boards. Available as an option for Saturn 32K boards.

#### 3. PSEUDO-DISK FOR CP/M®

This software package greatly enhances the utility of CP/M programming by providing ready storage for programs and data, without the inconvenience of slow disk access. Great for WORDSTAR and other programs with extensive disk use. Works with one or more Saturn boards, to a maximum of 256K. The PSEUDO-DISK is carefully documented and simple to use.

Included with all Saturn 64K and 128K boards. Available as an option for Saturn 32K boards.

### RAMEXPAND

This program allows one to use the Saturn board(s) for storing and loading subroutines, program segments, and arrays from INTEGER BASIC or APPLESOFT. This enables fast and efficient chaining and overlaying of BASIC programs as well as storage and retrieval of data without delays due to slow disk access. The package is designed to run in a variety of system environments, taking advantage of one or more Saturn boards as well as a standard 16K RAM board (if present).

Included with all Saturn boards.

## VISICALC EXPAND

### VC-EXPAND

This program expands the memory available to VisiCorp's 16 sector VisiCalc on an Apple II, II Plus, or IIe with one or more Saturn boards. A standard 16K board may be used as well.

Your workspace memory under VC-Expand will depend on the boards present in your system as follows:

BOARDS PRESENT	APPROX. MEMORY
1 Saturn 32K	48K
1 Saturn 32K + one 16K	64K
1 Saturn 64K (or 2 Saturn 32K)	80K
1 Saturn 64K + 1 16K	96K
1 Saturn 64K + 1 Saturn 32K	112K
1 Saturn 128K	144K
1 Saturn 128K + one 16K	160K
1 Saturn 128K + Saturn 32K	176K

The VC-EXPAND software modifies VisiCalc in memory, without altering your VisiCalc diskette. VC-EXPAND will not noticeably slow down your VisiCalc calculations, although of course your Apple will need more time to recalculate the much larger spreadsheets you will be able to create with this system.

#### FAST SAVE/LOAD

Since the very large files possible with VC-EXPAND may take a long time to save and load in the usual format, VC-EXPAND now offers a fast save option. This feature saves files in binary format. Saving and loading takes less than a minute with this option. VC-EXPAND also includes the normal (text) save format so that you can still use other Visi programs on your

models. If you use only VisiCalc, however, you can do all your file saving in the fast binary format.

#### MATRIX SIZE

VC-EXPAND modifies VisiCalc to let you use the entire displayed matrix, from A1 to BK254. (VisiCalc alone allows only about 9,000 cells.) This feature enables you to create far more extensive and powerful financial planning models.

#### MULTI-DISK FILES

Since the Apple diskette holds about 128K, you may need more than one diskette for your large models. VC-EXPAND takes care of this very simply for you: just switch diskettes when the screen prompts you.

#### VC/80

VC/80 lets you get 80 column display for your VisiCalc models when you use one of the following boards:

1. Videx Videoterm
2. ALS Smarterm
3. M & R Sup'R Terminal
4. Vista VisiTerm-80

Support for other 80 column boards is also planned. VC/80 supports entry of upper/lower case letters in your VisiCalc models.

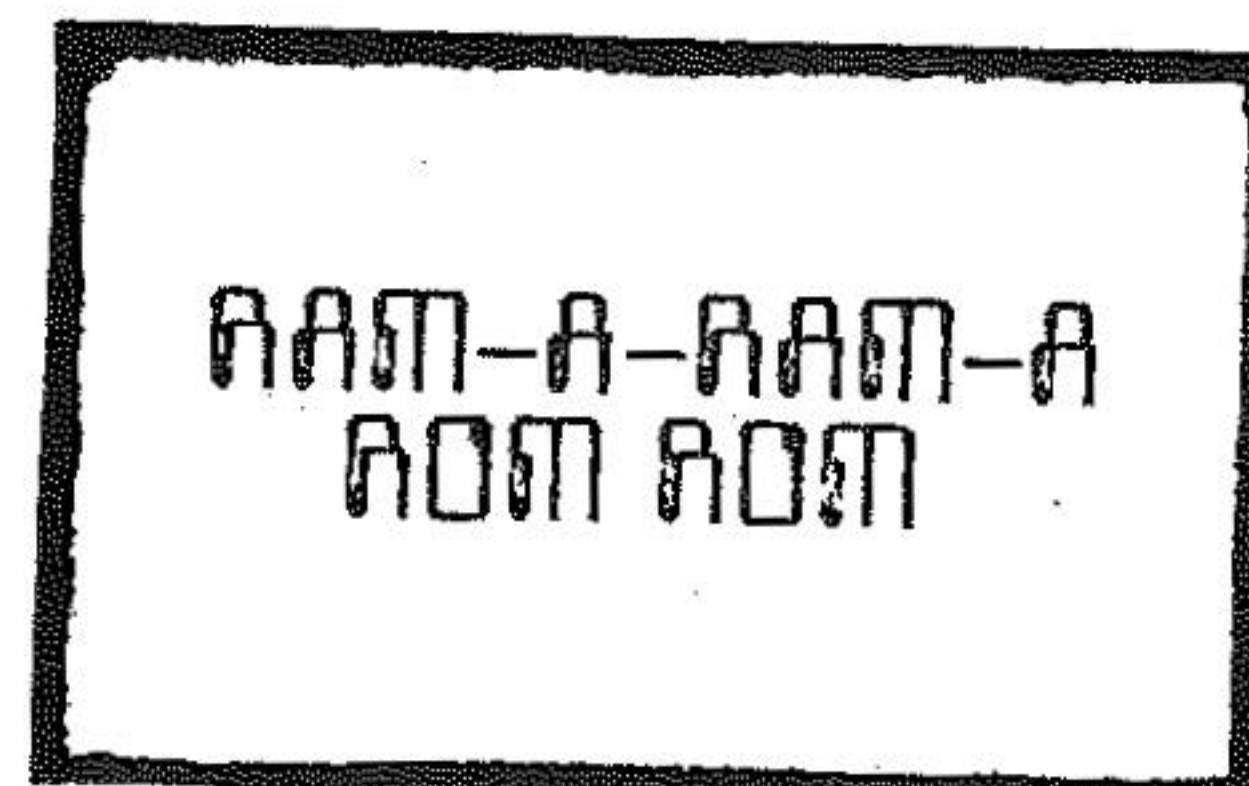
#### VC-EXPAND/80

VC-EXPAND/80 combines all the features of VC-EXPAND and VC/80. It can be used in the 40 column mode without an 80 column board.

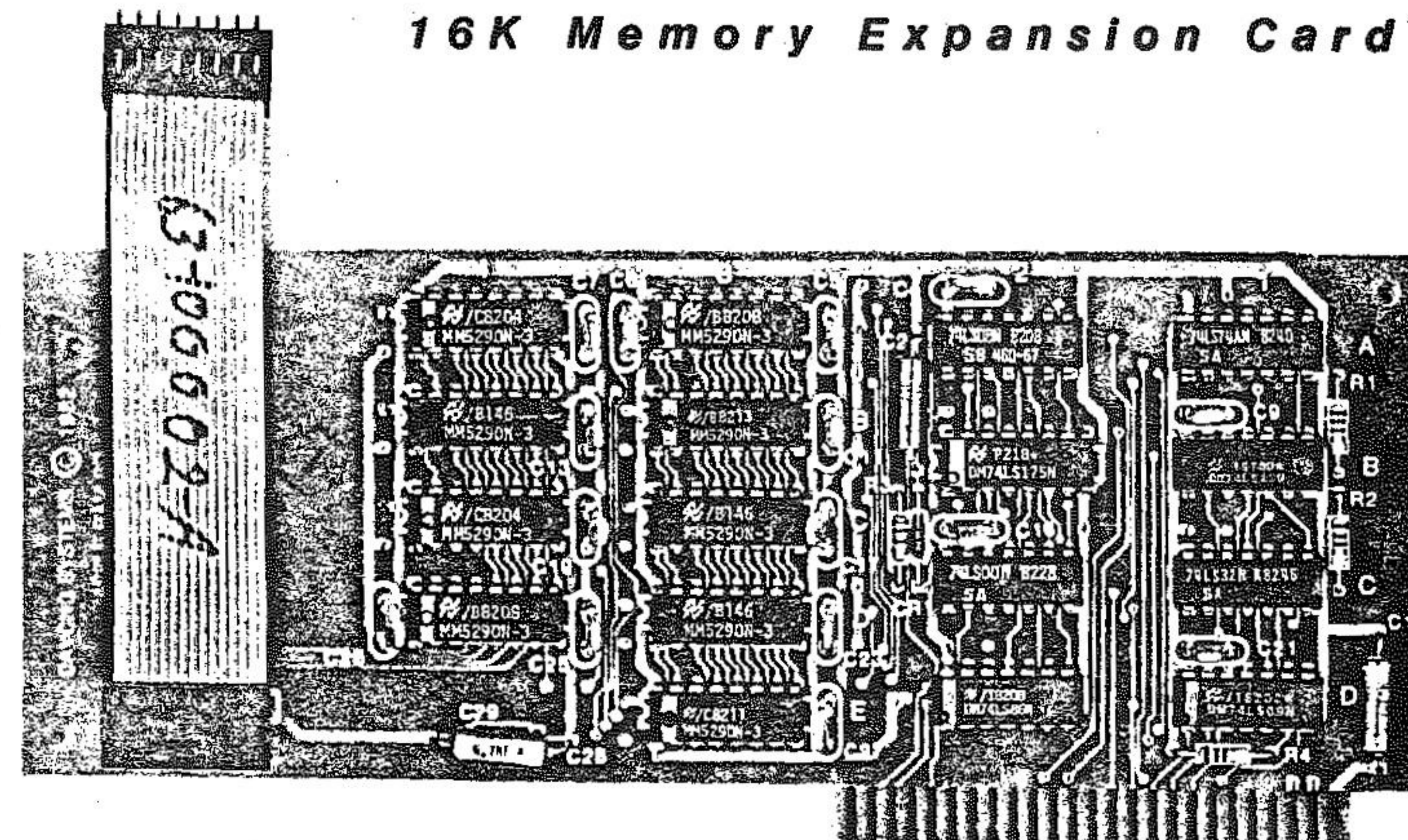
This program, with appropriate hardware, vastly expands your VisiCalc modeling capabilities. The display window becomes twice the normal size, and the workspace can be almost 10 times its original size. See table under VC-EXPAND. Note that you may have 1K less than the table indicates, since VC-EXPAND/80 is larger than VC-EXPAND.

VC-EXPAND/80 is recommended for all VisiCalc users who have or are considering an 80 column board.

Saturn's VisiCalc expansion programs are well-supported software packages with constant attention being given to expanding business needs. As new features are added, upgrades are made available to current users at nominal cost. The VisiCalc expansion software is written for Saturn by Micro Solutions, Inc.



## 3A SPECIAL 16K Memory Expansion Card \$40



DAVONG Systems, Inc.

## DSI-A16 REFERENCE GUIDE

03-200018 REV-A

### FEATURES

- 16K byte memory expansion card for the Apple<sup>®</sup> Computer.
- Completely compatible with Apple Computer software and hardware.
- Runs at the same speed as Apple memory products.

### DSI-A16 INSTALLATION INSTRUCTIONS

#### ▶ TURN THE POWER OFF

Since you will need to go inside your APPLE it is important for your safety and the integrity of the devices inside the APPLE that the power be off when removing or installing any component.

#### ▶ REMOVE THE COVER FROM YOUR APPLE

The cover of the APPLE is fastened with plastic snaps at the back edge and is slid under the front edge. To remove the cover pull up firmly on the rear edge. When the snaps release be careful that the edge you're holding does not rise more than about one inch.

Slide the cover toward the rear of your APPLE to expose the interior.

#### ▶ REMOVING A CHIP

Installation of DSI-A16 requires that one of the chips in the APPLE be removed. To locate the chip look inside your APPLE and locate a large white or gold square on the circuit board. This square is about 4"x4" and surrounds an area 8 chips by 3 chips. See figure 1.

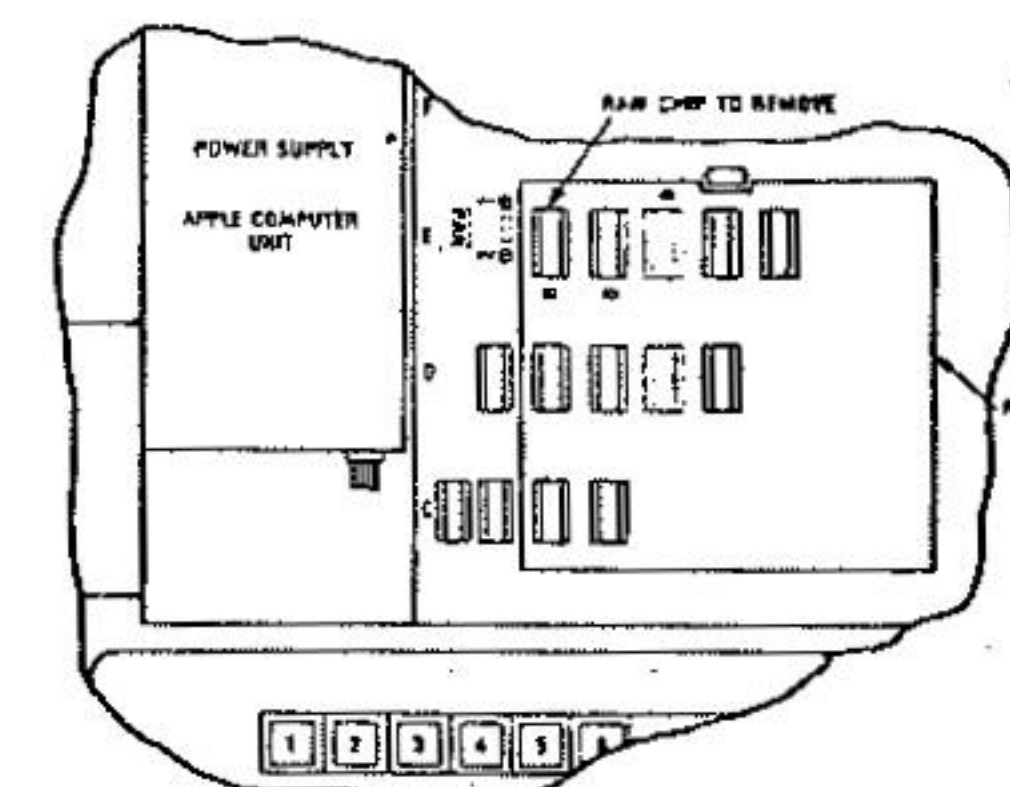


fig. 1

### IMPORTANT

Touch the power supply cover (the gold box inside the APPLE and to the left) before touching any components. This discharges any static electricity you may be carrying. A high static charge (you could carry up to 20,000 volts) can damage electronic devices.

#### ▶ SLOT 0 MUST BE EMPTY

If there is already a card in slot 0 then remove it.

#### ▶ LOCATE THE CHIP TO REMOVE

In the upper left corner of the big white square is the RAM chip you will need to remove.

#### ▶ TO REMOVE THE RAM CHIP

You will need a small flat blade screwdriver or a small pen knife to pry up the RAM chip. The RAM chip is in a socket which is about 3mm thick. Insert the screwdriver between the socket and the RAM chip. Pry the chip up about 1-2mm and no further. Remove the screwdriver and insert it in the other side. Again pry this side of the RAM up about 1-2mm. Repeat this procedure raising each side 1-2mm with each iteration until the RAM chip has been removed. Be careful during this step. It is easy to bend the pins on a chip during removal. Also, it's a good idea to touch the power supply box to discharge any static you may be carrying.

#### ▶ ATTACHING THE CABLE CONNECTOR

The plug at the end of the ribbon cable will go into the empty RAM chip socket. The edge strip (the part that sticks out from the board) will go into slot 0. Position the card with the edge strip over slot 0. This will position the plug on the ribbon cable near the empty RAM socket. Insert the RAM plug into the socket gently. The cable should bend away from the DSI-A16 card and then back around near the empty socket. The cable should not be twisted. Again, use care in inserting the plug not to bend the pins. If you find it difficult to firmly seat the plug, remove it and realign the pins and try again. You may need to wiggle it slightly but do this very slowly.

#### ▶ INSERT THE EDGE STRIP INTO THE CONNECTOR

Position the card so that the edge strip is centered over the slot 0 edge connector. Set it down into the slot and press firmly. The card should go in with some resistance for about 5mm and stop.

It's a good idea to recheck your work and re-read the instructions to be sure all is correct. When you feel satisfied with the installation replace the cover to your APPLE and you are finished.

Apple is a registered trademark of Apple Corporation

Davong Systems, Inc.  
1061 Terra Bella Avenue, Mountain View, CA 94043  
(415) 965-7130



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NMNR N ITEM                                LIST AAA$
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60

## 61

Apple is a trademark of Apple Computer Corp. UNIX is a trademark of Bell.

**SELLATION TWO**

The Lobero Bldg.  
P.O. Box 2342  
Santa Barbara, CA 93120  
(805) 966-1140 TELEFAX 6584

The result of a 3-year project between Motorola Corp. and Microware, OS9/BASIC 09 is a 'Unixlike' Operating System based on THE MILL's 6809 processor.

This human engineered system provides a BASIC with an extremely fast interpreter and rich set of operators & functions. The fluid nature of this unique BASIC resembles PASCAL; and thru OS9, an APPLE II is able to execute three or more programs all at the same time!

OS9/BASIC 09 is available for the APPLE II only thru THE MILL.



NMBR N ITEM LIST AAA\$

```

** CREATIVE COMPUTER PERIPHERALS
-----
1544 KEYWIZ 83                299 280
1546 KEYWIZ 83 & WORD PROCESSOR 399 318
1545 KEYWIZ CONVERTIBLE      299 280
1543 KEYWIZ VIP              439 412

```

** DAN PAYMAR			
-----			
1553	LOWER CASE ADAPTER-OLD	38	29
1554	LOWER CASE ADAPTER-REV7+	28	18
2402	LOWER CASE DEMO "DICE"	10	7

```

** DATA SHIFT
-----
1562 LOWER CASE ADAPTER A          25  24
1564 LOWER CASE ADAPTER B          50  48

```

1629 \*\* DMS ELECTRONICS  
PRESFAX 100 175 147

** EXECUTIVE PERIPHERAL SYSTEMS		
1747	EPS KEYBOARD	350 325
1752	EPS MODULE APPLEPLDT	33 28
1749	EPS MODULE APPLEWRITER II	33 28
1765	EPS MODULE BENCHMARK	33 28
1756	EPS MODULE DB MASTER	33 28
1758	EPS MODULE dBASE II	33 28
1766	EPS MODULE EASY WRITER	33 28
1759	EPS MODULE EXECUTIVE SECRETARY	33 28
1753	EPS MODULE LETTER PERFECT	33 28
1764	EPS MODULE MAGIC WINDOW	33 28
1762	EPS MODULE MULTIPLAN	33 28
1767	EPS MODULE PASCAL	33 28
1750	EPS MODULE PFS:FILE	33 28
1761	EPS MODULE PIE WRITER	33 28
1755	EPS MODULE SCREEN WRITER II	33 28
1763	EPS MODULE SUPERCALC	33 28
1760	EPS MODULE VERSAFORM	33 28
1748	EPS MODULE VISICALC	33 28
1751	EPS MODULE VISIDEX	33 28
1757	EPS MODULE WORD HANDLER	33 28
1754	EPS MODULE WORDSTAR	33 28
1769	^BURN YOUR OWN PROM KIT	75 28
1770	^EXTENSION CORD 20'	35
1768	^SOFTSWITCH TO USE BOTH KEYBOARDS	40

LIST AAA\$

** IVERS SPECIALTIES		
-----		
1955	SIXTH FINGER A-ADJ AUTO REPEAT	13
1954	SIXTH FINGER-AUTO REPEAT	10

1987      \*\* KEY TRONIC  
KB200 KEYBOARD      298

** LAST ELECTRONICS		
-----		
	> CLEAR PLEXIGLAS	
1991	PLEXA-LOK KEYBOARD COVER	20
1992	PLEXA-LOK W/ETCHED APPLE ADD...	1

** LAZER SYSTEMS		
-----		
1996	KEYBOARD PLUS-LOOK AHEAD BUFFER	90
1994	LOWER CASE PLUS	60
1995	LOWER CASE PLUS II	25
2925	" " " III	50

```

** LJK ENTERPRISES
-----
2035 LOWER CASE CHARACTER GENERATOR 35

```

2135 \*\* MICROMAX SYSTEMS  
-----  
UPPER/LOWER CASE ADAPTER 30

```

** MPC PERIPHERALS
-----
2202 UPPER/LOWER CASE EPROM

```

2211      \*\* MPI  
KEYPAD A032      150

\*\* QUENTIN RESEARCH  
-----  
2625 LOWER CASE ADAPTER PROM 20

2825      \*\* SILICON VALLEY SYSTEMS  
            -----  
            SHIFT WIRE MODIFICATION      14

2921      \*\* SOUTHERN CALIFORNIA RESEARCH  
MAGIC KEYBOARD      90

3159 \*\* TEXWIPE  
-----  
KEYBOARD CLEANING KIT DTC296 18

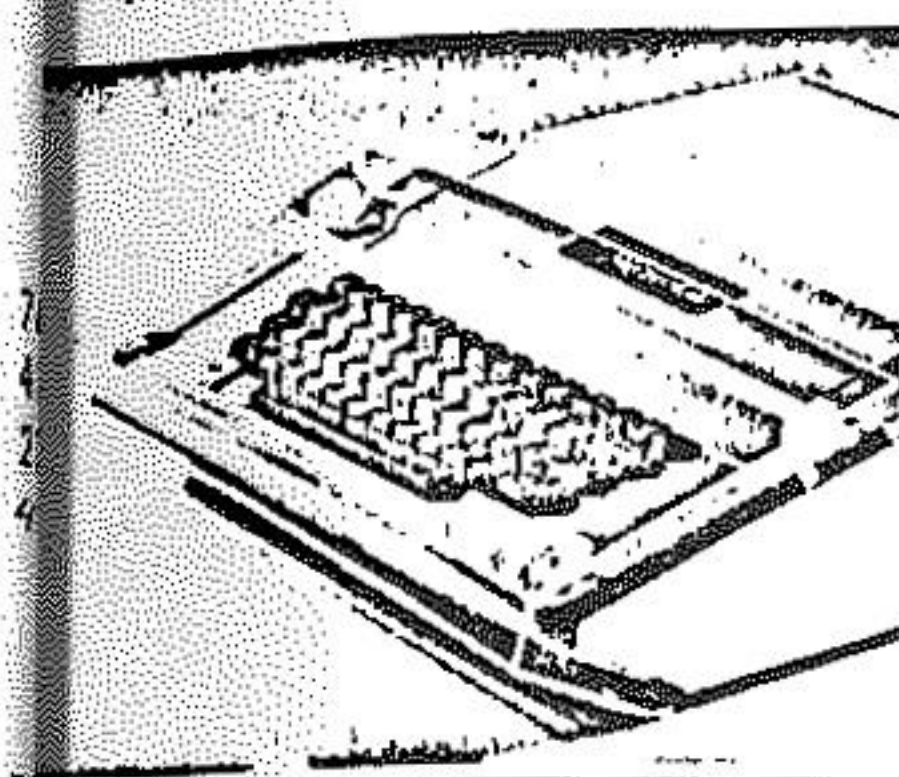
## NMNR N ITEM LIST AAA#

**LAST ELECTRONICS**  
P.O. BOX 1300  
SAN ANDREAS, CA 95249  
(209) 754-1800

OFFERED FOR THE FIRST TIME PLEXA-LOK COMES WITH A  
30-DAY MONEY BACK GUARANTEE IF NOT SATISFIED!

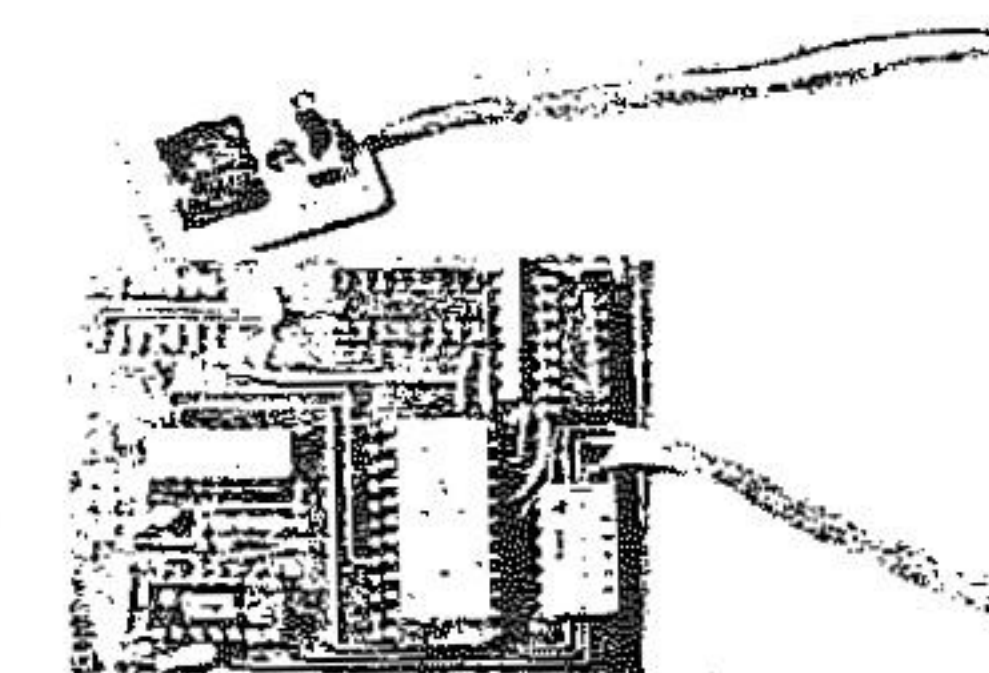
LEXA-LOK allows your secretary to go on break without having to worry about visitors accidentally destroying their hours (and your \$) of work.

- **ENHANCES** looks of your system
- **PROTECTS** keyboard from dust
- **ALLOWS** computer to remain on while unattended



For Apple ][, ][+ and Franklin

- At the flip of a switch, select between standard "QWERTY" keyboard and your choice of DVORAK, A.S.K., MONTGOMERY, LEFT & RIGHT ONE-HANDED, and ALPHABETICAL ORDER
- Converts APPLE™ keyboard to one of eight 10-key or hexadecimal keypads
- Hardware conversion—compatible with all software
- Decals provided
- Works with any revision Apple™ II or II+
- Instantly switches between standard keyboard and keypad • Custom layouts available
- Installs easily, no soldering
- Easy modification and optional PROM allows true upper/lower case entry
- Does not use an expansion slot
- Software compatible with all word processors



Some of the alternate keyboards are:

**DYORAK** — Scientifically designed to reduce typing fatigue, and increase speed.

**AMERICAN SIMPLIFIED** — A popular variant of the DVORAK simplified keyboard.

**ONE HANDED** — For the amputee or stroke victim. These two keyboards (left and right handed), are designed to give the strongest fingers the most work.

**THE MAGIC KEYBOARD** is 100% software compatible with all programs, such as VISICALC™, BPI™, etc. In fact, there are specially designed keypads within **THE MAGIC KEYBOARD** for each of these programs. In all, there are four numeric keypads to choose from, as well as four hexadecimal keypads for machine language programmers. You may quickly change your selection of keypads, should the need arise.



	** TKC		
3184	NUMERIC KEYPAD	150	141

** VIDEX		
-----		
3280	ENHANCER II & FUNCTION STRIP	215 179
3251	ENHANCER II REV 7+	149 124
3252	FUNCTION STRIP	79 64
3253	KEYBOARD ENHANCER REV 0-6	129 108
3286	LOWER CASE ADAPTER REV 0-6	35 30

** VISTA COMPUTER		
-----		
3304	VISION 20 CHARACTER GENERATOR	25 18
3303	KEYBOARD 40 CHARACTER BUFFER	39 31
3315	INTELLIGENT KEYBOARD CARD	199 165

## Lazer

**lower case  
+ plus**

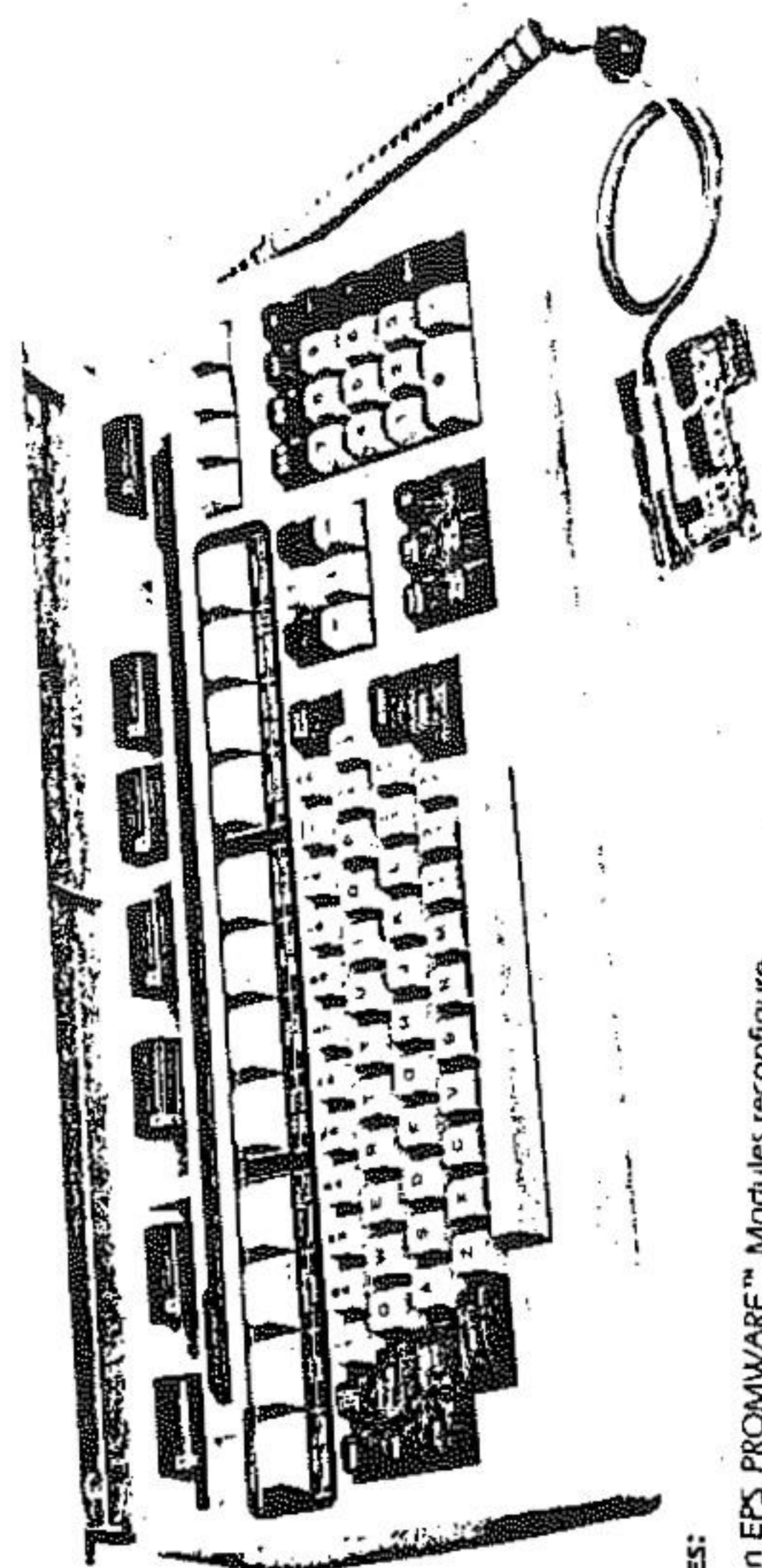


# GRAPHICS & LOWER CASE CHARACTER GENERATOR FOR THE APPLE II COMPUTER

- + Normal & Inverse Lower Case.
- + 2 complete character sets on board.
- + Graphics character font built in.
- + Expansion socket allows access to external character sets.
- + 2716 EPROM compatible char generator.
- + More supporting software. (on diskette)
- + Keyboard +Plus & Graphics +Plus designed around the Lower Case +Plus.



## A NEW LIFE FOR YOUR APPLE II® MOVE UP TO THE NEW GENERATION WITH AN EPS KEYBOARD!



### FEATURES:

- Plug-in EPS PROMWARE™ Modules reconfigure keyboard for popular software packages, virtually eliminating complex command sequences.
- 12 Special Function Keys give up to 48 commands for popular software packages when used with EPS PROMWARE™ Modules.
- PROMWARE Modules available for WORDSTAR™, VISICALC™, APPLEWRITER II™, SCREENWRITER II™, and other packages.
- Interface Board plugs into keyboard socket on motherboard, no I/O slot required.
- 6 ft. cord and telephone style jack provide convenient placement and portability.
- Latching cover secures extra PROMWARE™ Modules and Command Templates.

### TECHNICAL SPECIFICATIONS

- Full ASCII character set
- Microprocessor controlled
- Pinout matches APPLE II requirements
- Parallel output
- Power 5 Volts, 100 mA
- 19 1/2 x 9 x 3"
- 5 1/2 lbs.

Economic •• Flexible •• Comfortable  
THE COMPLETE, INTELLIGENT SOLUTION  
Ideal for both Business and Personal Applications

To order, please call or write to:

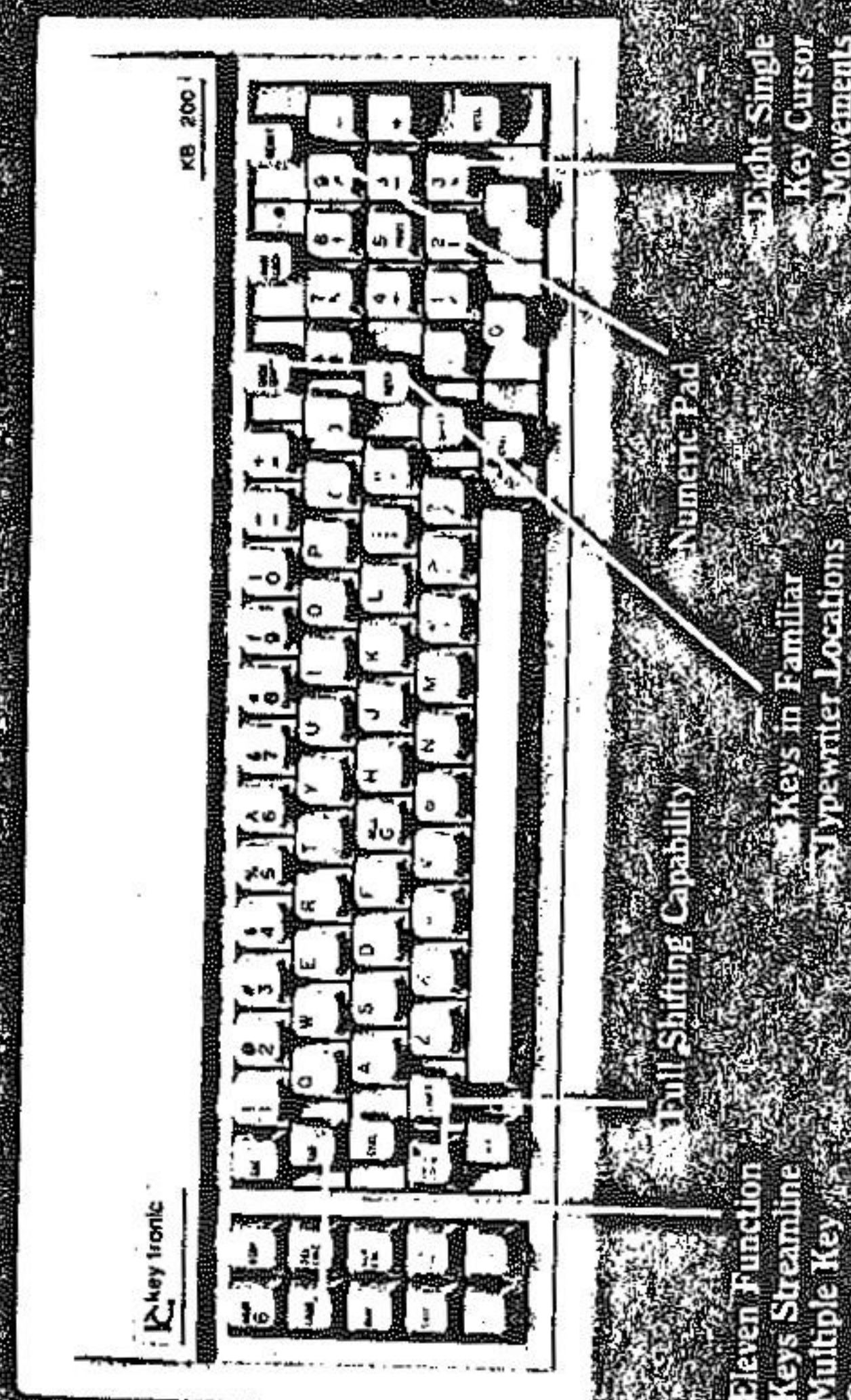
**EPS**

Executive Peripheral Systems, Inc.  
800 San Antonio Road, Palo Alto, CA 94303 (415) 856-2822

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\*Trademarks of Microsoft International, Personal Software, Apple Computer Inc., and On-Line Systems

Now life Compatible!

## KEY-TRONIC POLISHES THE APPLE II\* KEYBOARD



Enhance your APPLE II\* Computer System with a Key-Tronic keyboard peripheral.

This detached, low-profile keyboard is plug-compatible with the existing keyboard socket of the Apple II. It also features reliable microprocessor electronics, solid-state capacitance switches, and positive tactile feedback.

Price: \$298.00, includes shipping & handling. To Order Model KB-200 Call Toll Free 1-800-262-6006 (8 a.m.-4 p.m. Pacific Standard Time).

key tronic

THE RESPONSIVE KEYBOARD COMPANY  
DEPT. EI • P.O. BOX 14687 • SPOKANE, WASHINGTON 99214 USA

NMBR N ITEM

LIST AAA\$

### \*\* ANCHOR AUTOMATION

1131	MARK I 300 BAUD RS232	99	84
1132	MARK VII 300 BAUD RS232	150	115
1134	MARK VIII 300/1200 BAUD RS232	399	299
1133	POWER SUPPLY-115VAC TO 9VDC	10	9

### \*\* CALIFORNIA COMPUTER SYSTEMS

1320	ASYNCHRONOUS COMM CARD 7710-02	135	121
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### \*\* HAYES MICROCOMPUTER PRODUCTS

1826	CHRONOGRAPH SERIAL	249	204
1822	MICROMODEM II	379	293
1823	MICROMODEM II W/TERMINAL PGM	409	324
1828	MMII PROGRAM	15	13
1827	MMII TERMINAL PROGRAM	99	68
1824	SMARTMODEM 300 SERIAL	289	236
1825	SMARTMODEM 300/1200 SERIAL	699	554
7585	" Terminal Pgm	99	

### \*\* INTRA COMPUTER

1929	ASYN NULL MODEM ANMI	28	26
1931	CABLE CONFIGURATOR CC1	60	55
1928	F-F SEX CHANGER SC2	28	26
1930	LINE MONITOR LM1	40	37
1927	M-M SEX CHANGER SC1	28	26
1951	MODEM ELIMINATOR ME1	350	306
1952	PROGRAMMABLE SERIAL IO CARD	200	179
1932	RS232 CURR LOOP CONVERTER CLIP	85	78

### \*\* LEXICON

2023	LEX-11 ACOUSTIC MODEM RS232	160	135
2024	LEX-11 MODEM & CHARGER RS232	200	167
2025	LEX-12 DIRECT MODEM RS232	200	167

### \*\* M&R ENTERPRISES

2045	SUP'R ACCESS-MODEM & 7 RS232 PTS		
------	----------------------------------	--	--

Communications  
can be  
a Baudy Bitch!

## MODEMS

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LIST AAA\$

### \*\* MICROCOM

2091	PCS/1200 W/64K RAM	995	850
2090	PCS/300 W/64K RAM	695	601
2092	RX/1200-ERROR CORRECTING MODEM	895	765
2093	RX/300-ERROR CORRECTING MODEM	495	434

### \*\* MULTI-TECH SYSTEMS

2214	BREAKOUT MONITOR MT25 RS232C	149	103
2212	MODEM II FOR APPLE	399	319
2213	MULTI-MODEM II (AVAIL LATE FALL)		

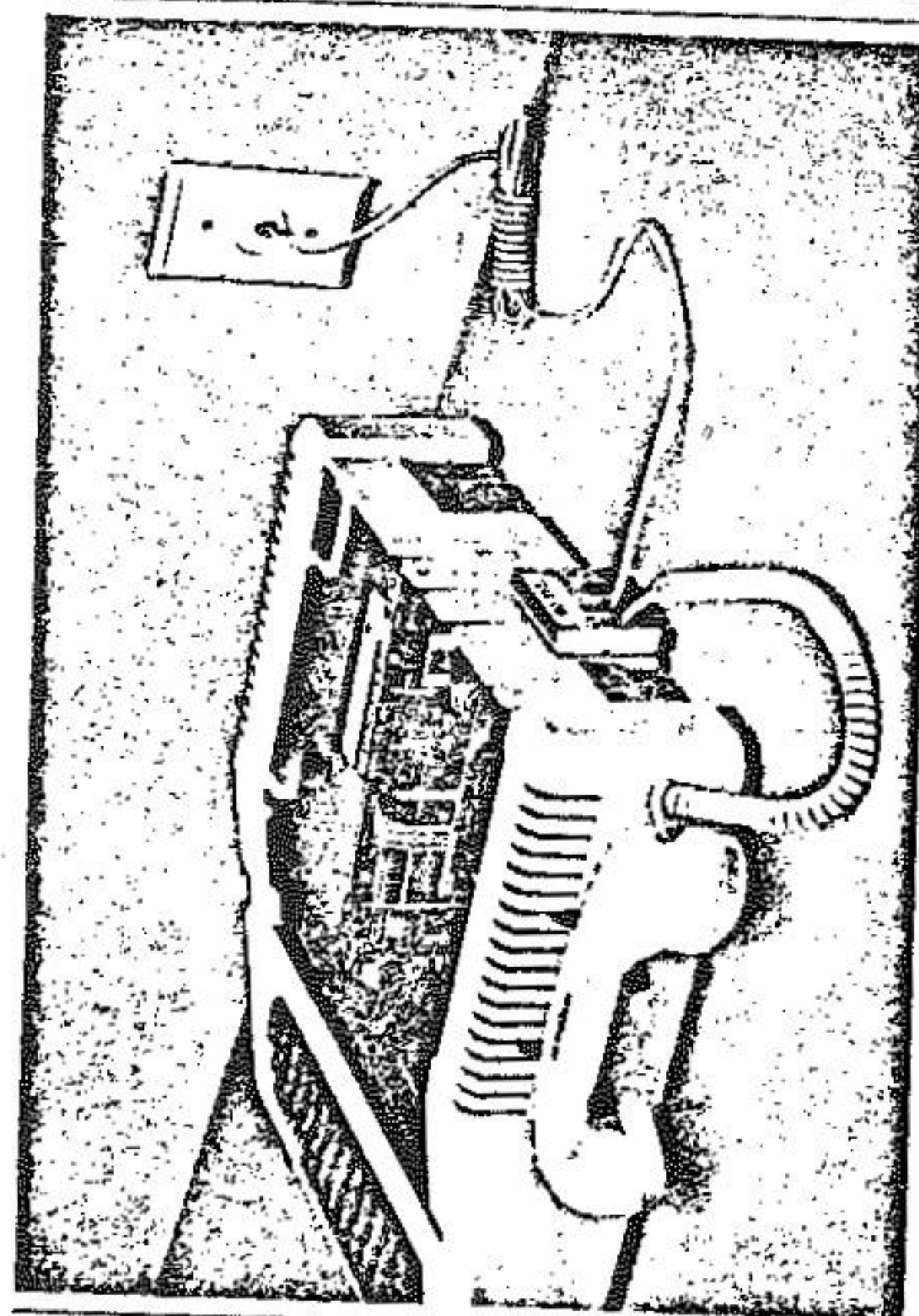
### \*\* NOVATION

2281	APPLE CAT EXPANSION	39	39
2271	APPLE CAT II	389	301
2277	APPLE CAT II 212 SYSTEM	725	657
2276	APPLE CAT II 212 UPGRADE KIT	389	364
2272	AUTO CAT	249	238
2278	AUTO CAT 212-SERIAL STAND ALONE	695	643
2283	BSR CONTROL (REQ EXP MOD)	19	19
2284	CASSETTE REC CABLE (REQ EXP MOD)	8	8
2273	CAT-ACOUSTIC SERIAL	189	167
2288	COMM SOFTWARE	29	25
2274	D CAT-DIRECT CONNECT SERIAL	199	183
2289	EIA CABLE	19	15
2287	FIRMWARE DEAF	29	29
2286	FIRMWARE ROM	29	29
2282	HANDSET	29	29
2292	INFONE EXECUTIVE	945	864
2291	INFONE MAXI	1150	1039
2275	J CAT-300 BAUD SERIAL	149	124
2279	SMARTCAT-1200 BD 103/212 SERIAL	595	483
2280	SMARTCAT-300 BAUD 103 SERIAL	249	206
2290	SUPER MIKE	15	15
2285	TOUCH TONE RECEIVER	99	96

### \*\* SSM MICROCOMPUTER PRODUCTS

	> TPAKs include "THE SOURCE"		
2964	AMC300 MODEMCARD W/SOURCE	325	261
2952	COMPAK 1-TS1/AIO II/ACS02	289	223
2953	COMPAK 2-TS2/AIO II/ACS02	339	256
2954	INTERNAL MODEM CARD	299	261
2947	TPAK 1-TS1/MODEMCARD	388	329
2950	TPAK 2 PLUS-TS2/ASIO/MODEM 1200	999	811
2948	TPAK 2-TS2/MODEMCARD	448	374
2951	TPAK 3 PLUS-TS3/ASIO/MODEM 1200	1100	902
2949	TPAK 3-TS3/MODEMCARD	569	461
2955	TRANSMODEM 1200, EXTERNAL	695	554
1948	CROSS OVER 232/24 SWITCH	240	215
1949	CROSS OVER VIDEO/BNC SWITCH	140	126





### Simple, plug-in installation

The Apple-Cat II PC board plugs into one of the peripheral slots inside your Apple. The small interface expansion module goes on the back of the computer and a ribbon cable connects the module to the PC board. The telephone handset and holder are mounted on the right side of the frame. The entire installation should take no more than 5 to 10 minutes. And just that quickly, you can begin to bring the world into your computer.

66

ITEMS SHIPPED WITH ORDER		PART NUMBER											
BENEFITS/FEATURES		PART NUMBER											
ORDER INFORMATION	BASIC APPLE-CAT II	490402	X	X	X	X	X	X	X	X	X	X	X
	EXPANSION MODULE	490403	X	X	X	X	X	X	X	X	X	X	X
	HANDSET	490404	X	X	X	X	X	X	X	X	X	X	X
	CSR CONTROL*	490405	X	X	X	X	X	X	X	X	X	X	X
	CASSETTE REC CABLE*	490406	X	X	X	X	X	X	X	X	X	X	X
	TOUCH TONE RECEIVER	490407	X	X	X	X	X	X	X	X	X	X	X
	FIRMWARE	490408	X	X	X	X	X	X	X	X	X	X	X
	DEAF FIRMWARE	490409	X	X	X	X	X	X	X	X	X	X	X
	SOFTWARE DISKETTE	490410	X	X	X	X	X	X	X	X	X	X	X
	300 BAUD M50RG FULL-HALF DUPLEX		X	X	X	X	X	X	X	X	X	X	X
ITEMS SHIPPED WITH ORDER	1200 BAUD HALF DUPLEX		X	X	X	X	X	X	X	X	X	X	X
	PULSE & TOUCH TONE		X	X	X	X	X	X	X	X	X	X	X
	VOICE TONE DIALING		X	X	X	X	X	X	X	X	X	X	X
	VOICE TONE RECEIVING		X	X	X	X	X	X	X	X	X	X	X
	VOICE RECORDING		X	X	X	X	X	X	X	X	X	X	X
	FSR X-10 CONTROL		X	X	X	X	X	X	X	X	X	X	X
	FSR REAR FULL DUPLEX PORT		X	X	X	X	X	X	X	X	X	X	X
	PROGRAM IN ROM		X	X	X	X	X	X	X	X	X	X	X
	APPLE CAT II CARD		X	X	X	X	X	X	X	X	X	X	X
	DISKETTE		X	X	X	X	X	X	X	X	X	X	X
ITEMS SHIPPED WITH ORDER	LINE MODULAR JACK		X	X	X	X	X	X	X	X	X	X	X
	HANDSET MODULAR JACK		X	X	X	X	X	X	X	X	X	X	X
	6 FT MODULAR CABLE		X	X	X	X	X	X	X	X	X	X	X
	HANDSET WITH CORD & HOLDER		X	X	X	X	X	X	X	X	X	X	X
	BSR CONTROL INTERFACE		X	X	X	X	X	X	X	X	X	X	X
	CASSETTE RECORDER CABLE		X	X	X	X	X	X	X	X	X	X	X
	FSR FIRMWARE ROM		X	X	X	X	X	X	X	X	X	X	X
	TOUCH TONE RECORDER		X	X	X	X	X	X	X	X	X	X	X
	EXPANSION MODULE		X	X	X	X	X	X	X	X	X	X	X
	PRICE												

\*Requires Expansion Module

NOTE: Apple-Cat II requires a disk Apple II or Apple II Plus and a single disk drive and a 3.2, 3.21 or 3.3 Disk Operating System (DOS 3.1). Diskette is formatted in 3.21 DOS. Conversion to 3.3 DOS can be done by using Apple II Muffin Program.

\*Apple is a registered trademark of Apple Computer Inc.

\*Cat is a trademark of Novation, Inc. which does not manufacture Apple computers.

\*FSR is a trademark of BSE Corporation.

\*Voice is a trademark of AT&T.

\*Z-80 Software is a trademark of Microsoft Consumer Products.

**Novation**

18664 Oxford Street, Torrance, CA 91356 / (213) 996-5060

See the Apple-Cat II Modem at your computer store.

## Apple Modem Comparisons

3-17-83	Multi-Tech Modem II	Hayes MicroModem II	Novation Apple-Cat II
List Price	\$399 (includes everything)	\$379 (doesn't include Terminal Program)	\$389 (various options extra cost)
General Features:			
Low Modem Error Rate	Yes	No	No
Call Progress Speaker	Yes	No	No
Jack for Telephone Set	Yes	No	Handset Option
Off Hook LED	Yes	Yes	Extra Option
Carrier On LED	Yes	No	No
UL Safety Approval	Yes	No	Yes

### Firmware Features:

Firmware Terminal Mode	Yes	Yes	Extra Option
Menu Driven	Yes	No	No
Manual Answer	Yes	No	No
Manual Originate	Yes	No	No
Change Attention Char.	Yes	No	No
80 Column Compatible	Most, complete	Some, partial	No
Remote Console Mode	Yes	Yes	No
Remote Console Issued Break (^C) for BASIC	Yes	No	No

### Program Control Mode Features:

User Programmable (CP/M & DOS)	Yes	Yes	Extra Option (BASIC only)
Advanced Terminal Program	Yes	Yes	\$30 Option; \$90 if bought separately
Simultaneously Copy to Disk & Printer while On-Line	Yes	No	No
Store up to 20 Phone Numbers to Autodial	Yes	No	Yes
Automatic Log-On	Yes	No	No
English Commands	Yes	No	No
Remote Control w/Disk	Yes	No	No
Comm Software Commands	Yes	No	No

### Compatibility:

DOS	Yes	Yes	Yes
BASIC	Yes	Yes	Extra Option
Apple PASCAL	No, Future	Partial	No
CP/M	Yes	Partial	No
Hayes	Yes	Yes	Extra Option (BASIC Only)

## PAPER CARTS

2712	PAPER WAGON 12x16x2.5 DW1216	43	29
2713	PAPER WAGON 32" FULL HANDLE DWHD	11	8

2971

2967/68/69/70

# STAR FORMS



Add Shipping-See P 73

## PRINTER PAPER

NMBR	N ITEM	LIST AAA*
** STAR FORMS		
> ADD FREIGHT---SEE UPS CHART!!		
> ALL REGISTER BOND PAPER		
2972	BOND 15# 3300 SHT 9.5x11	23
2975	BOND 15# 3300 SHT 9.5x11 GRNBAR	23
2976	BOND 15# 3500 SHT 15x11	34
2977	BOND 15# 3500 SHT 15x11 GRNBAR	34
2973	BOND 20# 2550 SHT 9.5x11	21
2974	BOND 20# 2550 SHT 9.5x11 DISPERF	23
2978	BOND 20# 2700 SHT 15x11	31
2982	SAME AS 2974 AND PUNCHED 3 HOLES	25
2979	^ BOND 15# 1500 SHT 15x11 GRNBAR	18
2980	^ BOND 15# 1500 SHT 9.5x11	14
2981	^ BOND 20# 1250 SHT 9.5x11 DSPRF	13
^ MINI-PAK CARTONS		

### \*\* TRENDCOM

3226	TRENDCOM 100 BLACK IMAGE 85' RL	45	37
3227	TRENDCOM 200 BLACK IMAGE 85' RL	48	44

## MAILING LABELS

### \*\* STANART

2967	LABEL 1 UP 05M/BOX P35-1	12
2968	LABEL 2 UP 10M/BOX P35-2	22
2971	LABEL 3 UP 15M/BOX P1525-3	37
2969	LABEL 3 UP 15M/BOX P35-3	33
2970	LABEL 4 UP 20M/BOX P35-4	43

## PRINT-OUT BINDERS/POSTS

### \*\* ABA SYSTEMS

1016	BINDER POSTS & SCREWS ASSTD 500	19	15
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### \*\* RING KING VISIBLES

> P/O MEANS PRINT OUT			
2704	TEN P/O BINDERS 11x15 B 1114B	38	26
2706	TEN P/O BINDERS 12x8.5 UB 1285B	40	27
2703	TEN P/O BINDERS 15x11 UB 1411B	41	27
2705	TEN P/O BINDERS 8.5x11 B 1185B	35	24
2707	TEN P/O BINDERS 8.5x11 UB 8511B	36	24
2708	TEN P/O BINDERS 9.5x11 UB 9511B	41	27
2709	^BINDER CADDY 36" CAP D36W	160	104
2710	^CASTERS FOR BINDER CADDY	20	14

67



# RIBBONS

NMBR N ITEM

LIST AAA\*

## \*\* ASPEN RIBBONS

A RIBBON CARTRIDGE 1/2" X 14YD	6	5
B RIBBON CARTRIDGE 1/2" X 20YD	7	5
C RIBBON CARTRIDGE 1/2" X 25YD	10	8
D RIBBON CARTRIDGE 5/16" X 135YD	6	5
E RIBBON CARTRIDGE 5/16" X 17YD	6	5
F RIBBON CARTRIDGE .65" X 170YD	3	3
G RIBBON CARTRIDGE 1/2" X 19YD	14	14
H RIBBON CARTRIDGE 1/2" X 30YD	13	11
I RIBBON CARTRIDGE 5/16" X 163YD	6	5
J RIBBON CARTRIDGE 1/2" X 15YD	7	6
K RIBBON CARTRIDGE 1/4" X 153YD	6	5
L RIBBON CARTRIDGE 3/4" X 40YD	8	8
M RIBBON CARTRIDGE 1/2" X 36YD	7	6
N RIBBON CARTRIDGE 5/16" X 292YD	5	4
O RIBBON CARTRIDGE 5/8" X 70YD	7	7
P RIBBON CARTRIDGE 5/16" X 227YD	7	6
Q RIBBON CARTRIDGE 5/16" X 12YD	6	5
R RIBBON CARTRIDGE 1/4" X 97YD	4	3
X RIBBON SPOOL 1/2" X 40YD	5	4
Y RIBBON SPOOL 1/2" X 12YD	3	3
Z RIBBON SPOOL 1/2" X 36YD	4	4

## \*\* ASPEN RIBBONS

> FIND PRICES ABOVE

1179	AB DICK MAGNA-WRITER - P		
1173	ANADIX 9xxx/6xxx - H		
1180	ANADIX DP8000 SERIES - Y		
1174	ANADIX SILENT/WORD SCRIBE - H		
1155	APPLE DMP - A		
1177	APPLE LQP - I		
1157	AXIOM GFBOM - B		
1171	AXIOM IMP 1 & 2 - G		
1181	BASIC 4 SID - Y		
1168	BROTHER EM-1 ELECTRONIC - F		
1182	BURROUGHS B20 - J		
1159	BURROUGHS WHITEONE - D		
1183	CADD SYSTEM 150 - J		
1175	CAPRO PRO IV - H		
1158	COMMODORE PET 4022 - B		
1164	COMMODORE PET 8300P - E		
1184	COMMODORE PET SPOOL - Y		
1165	COMPUCORP 25/32/40/55 - E		
1169	COMREX CR-1 - F		
1185	CONTROL DATA CDC 9334 - J		
1186	CPT ROTARY VIII - K		
1170	DAISYWRITER 1000/2000 - F		
1187	DATA GENERAL 5000 - J		
1188	DATA GENERAL 6040/41/42/43 - Z		
1160	DATA PRODUCTS D55 DW - D		
1189	DATA ROYAL IPS 5000/7000 - J		
1190	DATA SOUTH DS180 - J		
1176	DAVID COMPUTER 103/203/230 - H		
1191	DIABLO 620 - P	9	8
1166	DIABLO 630 - E		
1161	DIABLO HYTYPE II M/S - D		
1167	DIABLO HYTYPE II NYLON - E		
1162	DICTAPHONE DISPLAY 2000/3000 - D		
1192	DIGITAL DECPRINTER 1 - Z		
1193	DIGITAL DECWRITER 1/2 - Z		
1194	DIGITAL LA180 METAL - Z		
1195	DIGITAL LA30/36/40 - Z		
1156	DIGITAL LA50 - A		
1163	DIGITAL LQP-01 - D		
1178	DIGITAL LQP-02 - I		
1172	DIP 81/82/84/856 - G		

"B" Ribbon Cartridges are in stock  
in Red, Blue & Green \$7 each!

Cartridge Reloads..Next Page

# RIBBONS

LIST AAA\*

## \*\* ASPEN RIBBONS

> FIND PRICES ABOVE

3441	SMITH CORONA TP-I FABRIC	4	4
3442	SMITH CORONA TP-I M/S	10	10
2790	STAR MICRONICS DP822/B24 - Y		
1242	STARWRITER F10 M/S - D		
1304	STARWRITER F10 NYLON - E		
2791	TELETYPE 40 - Z		
2830	TELETYPE ASR 33 - Y		
1305	TELEX TC281B - A		
1430	TELEX TC286/241B/767 - E		
2829	TELEX TC287D - J		
3211	TEXAS INSTRUMENT 810 - Z		
1429	TOSHIBA P1010/P1150 - A		
3212	TRANSTAR 130 - N		
3444	TRANSTAR 315	15	14
3443	TRANSTAR 315 REINKING SET	8	8
3216	TRITEL - J		
1592	TWO DAY - G		
1596	VICTOR 601001 - B		
1595	VICTOR 602001 - C		
1886	VICTOR 604001 - D		
3215	XEROX 610/620 MEMORYWRITER - P		
1885	ZILOG B000 - H		

# CARTRIDGE RELOADS

## \*\* ASPEN RIBBONS

> BLACK RIBBON RELOADS

2515	A 1/2" X 14 YD RELOAD	3	
2516	B 1/2" X 20 YD RELOAD	3	
3449	C 1/2" X 25 YD RELOAD	4	
3450	D 5/16" X 135 YD RELOAD	2	
3451	E 5/16" X 17 YD RELOAD	3	
	F NONE		
3452	G 1/2" X 19 YD RELOAD	3	
3453	H 1/2" X 30 YD RELOAD	4	
3454	I 5/16" X 133 YD RELOAD	3	
3455	J 1/2" X 15 YD RELOAD	3	
3456	K 1/4" X 153 YD RELOAD	2	
	L NONE		
	M NONE		
	N NONE		
	O NONE		
	P TBA		
3457	Q 5/16" X 12 YD RELOAD	2	
3458	R 1/4" X 80 YD RELOAD	2	
	X NONE		
	Y NONE		
	Z NONE		

# PRINTER DUST COVERS

NMBR N ITEM

LIST AAA\*

## \*\* COVER CRAFT

> CLEAR PLASTIC

1518	DATASOUTH 180	13	11
1520	DEC LA34/38 W/PAPER ROLL	13	11
1519	DEC LA34/38 W/TRACTOR	13	11
1521	DEC LA35/180/78	13	11
1522	DEC LA36/LS120/LA120	13	11
1523	DEC LA50	9	8
1526	EPSON MX100	9	8
1524	EPSON MX80/70	9	8
1525	EPSON MX80FT	9	8
1527	IDS 440/445/460	5	8
1528	IDS 560/PRISM 132	9	8
1529	IDS PRISM 80	9	8
1538	MANNSEMAN TALLY T1602	13	11
1539	MANNSEMAN TALLY T1612	13	11
1516	NEC 739	9	8
1517	NEC 739 W/PAPER ROLL	9	8
1535	NEC 8023A	9	8
1536	OKIDATA ML82/82A	9	8
1537	OKIDATA ML83A/84	9	8
1515	PROWRITER 1 - 8510	9	8
1513	PROWRITER 2 - 1550	13	11
1512	SILENTYPE	9	8
1514	STARWRITER/PRINTMASTER F10	13	11
1540	TRENDCOM 100	9	8
1541	TRENDCOM 200	9	8

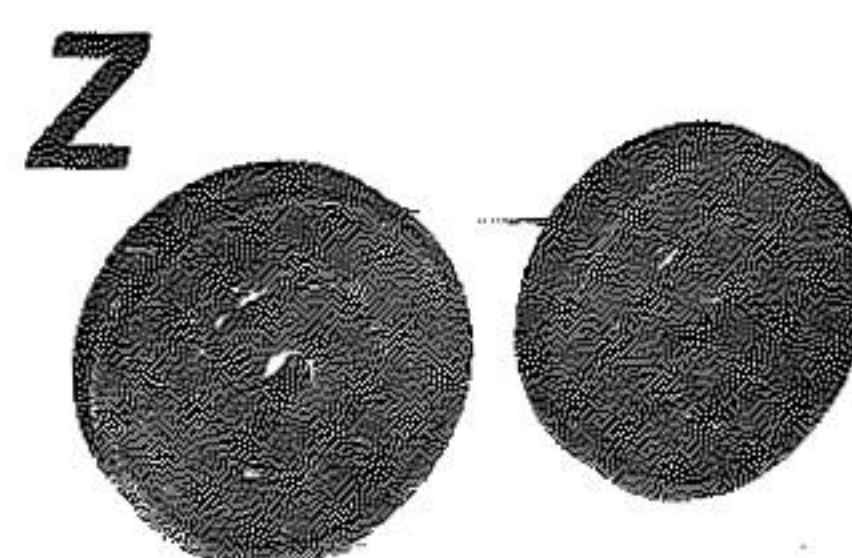
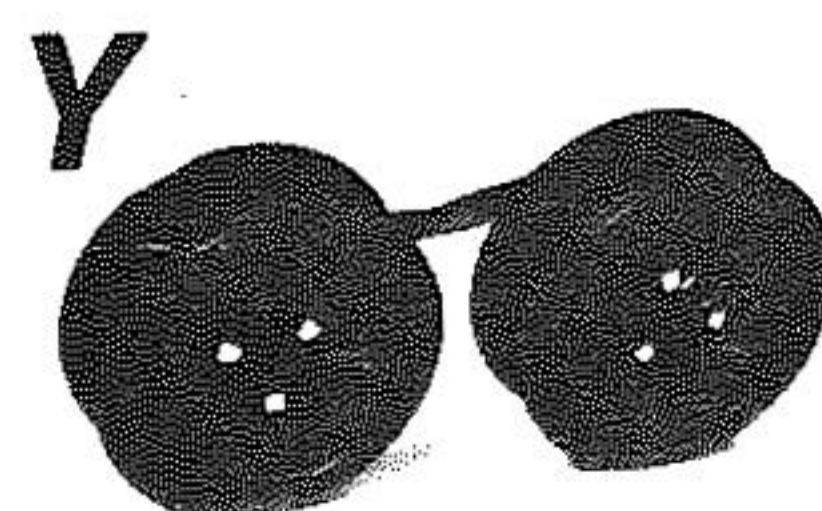
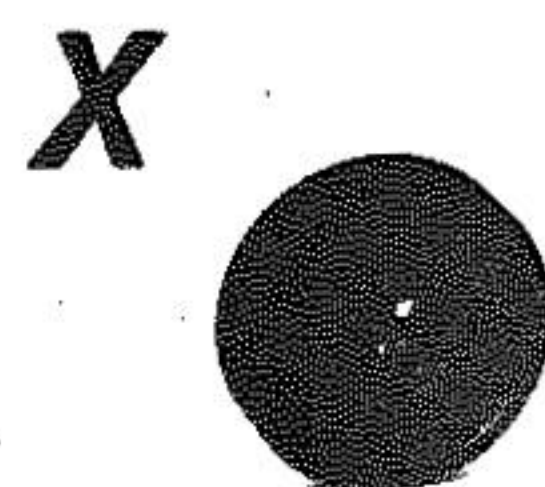
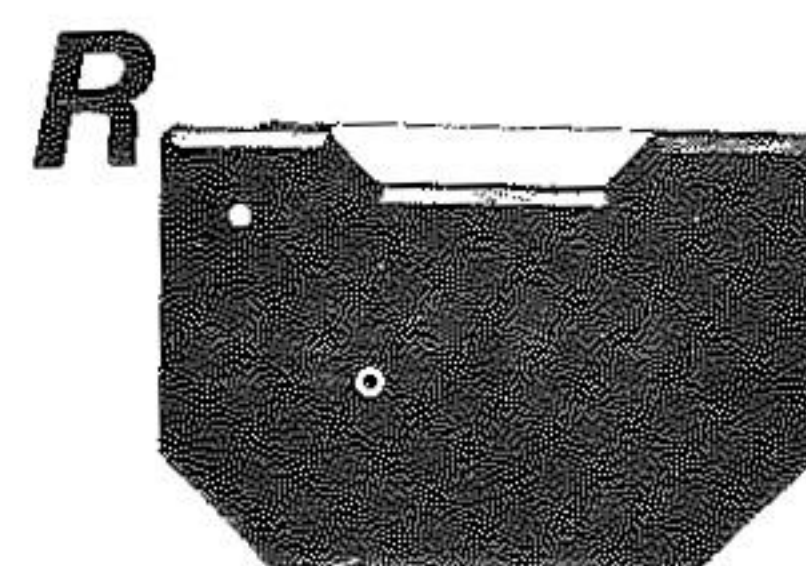
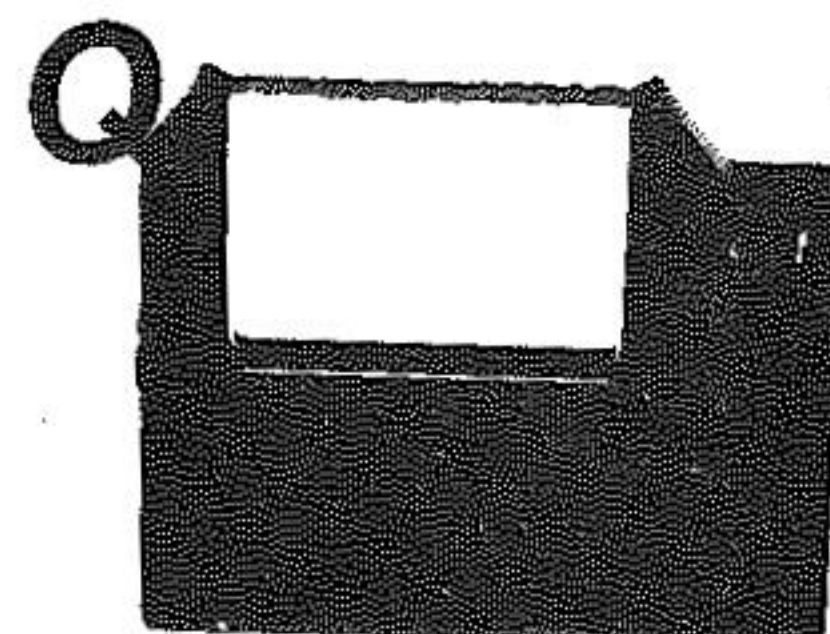
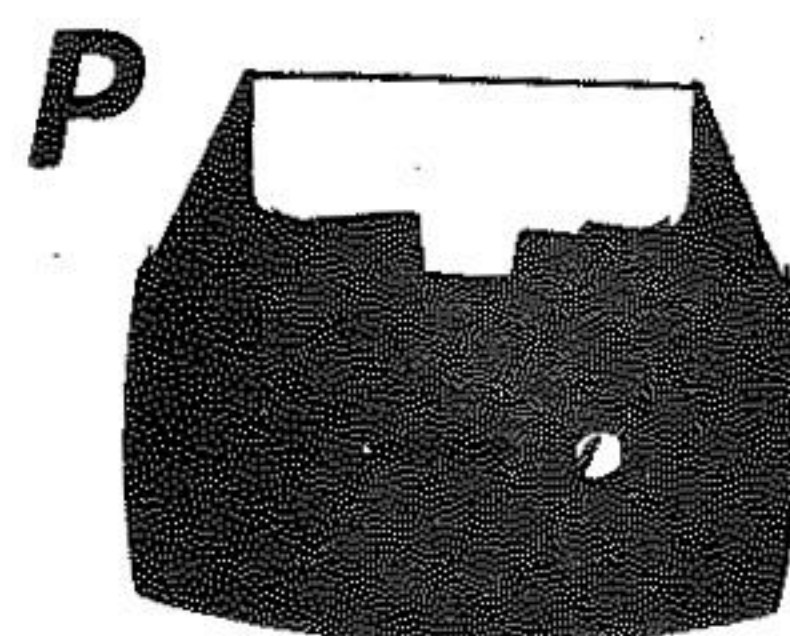
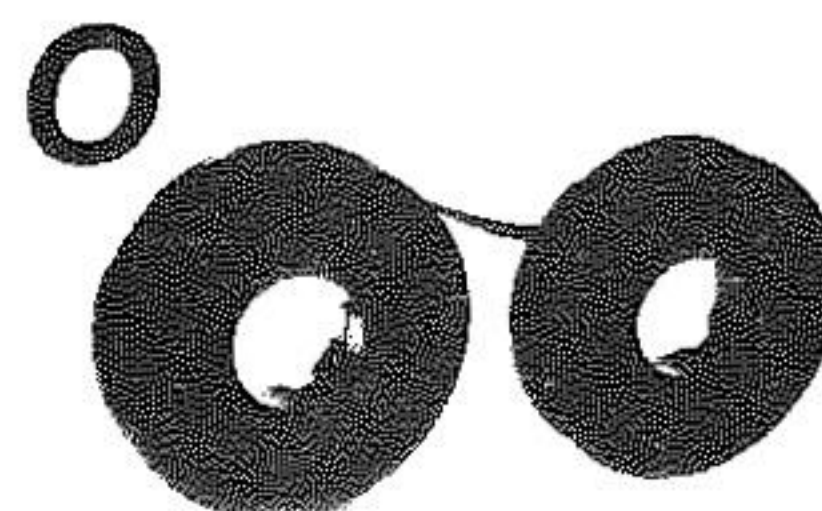
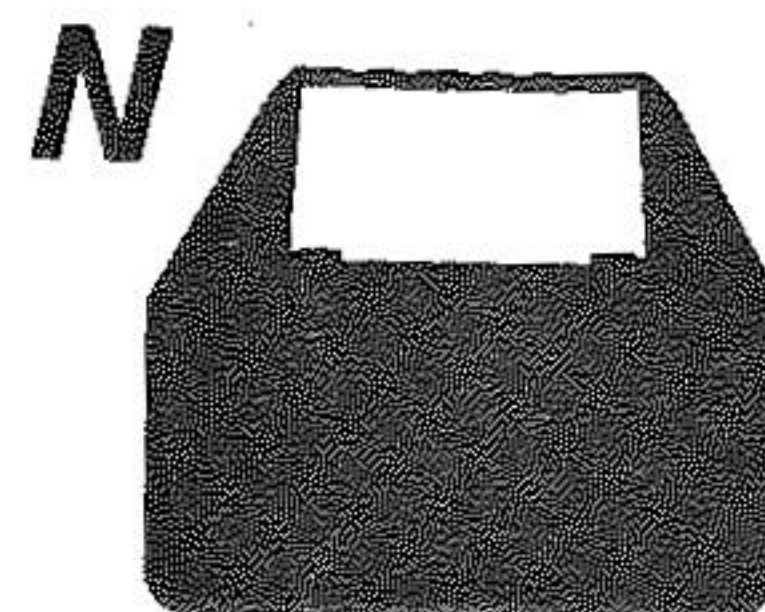
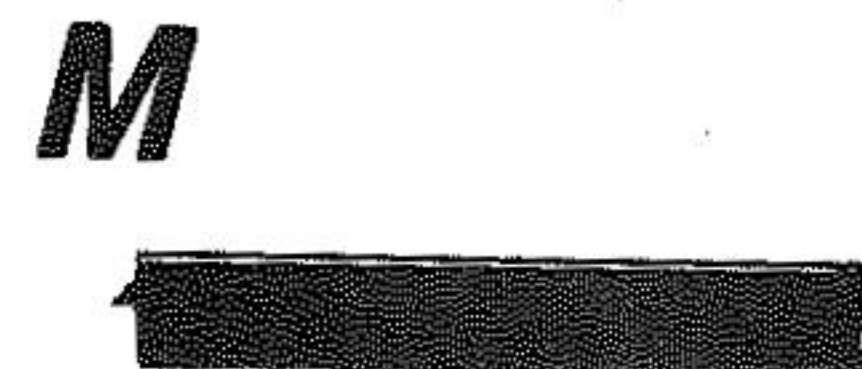
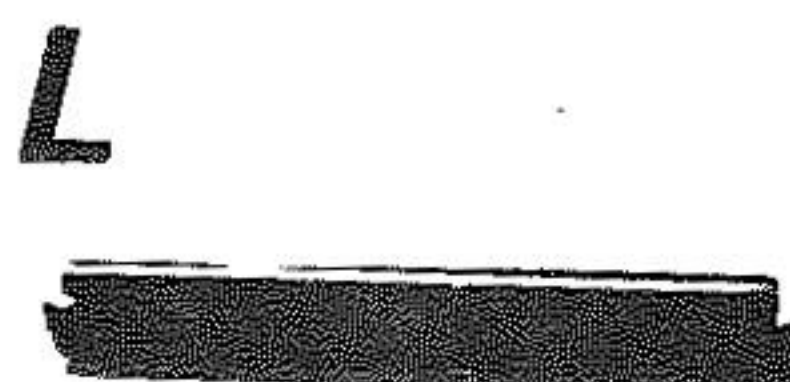
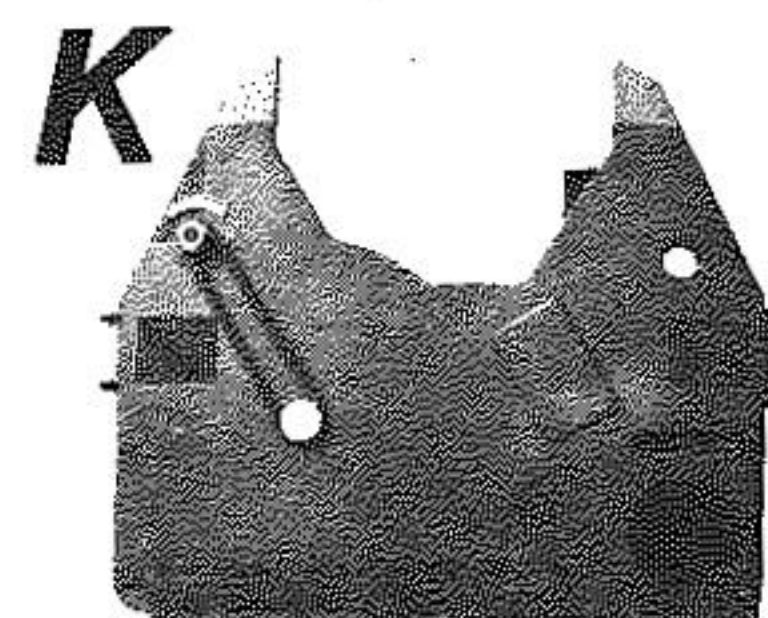
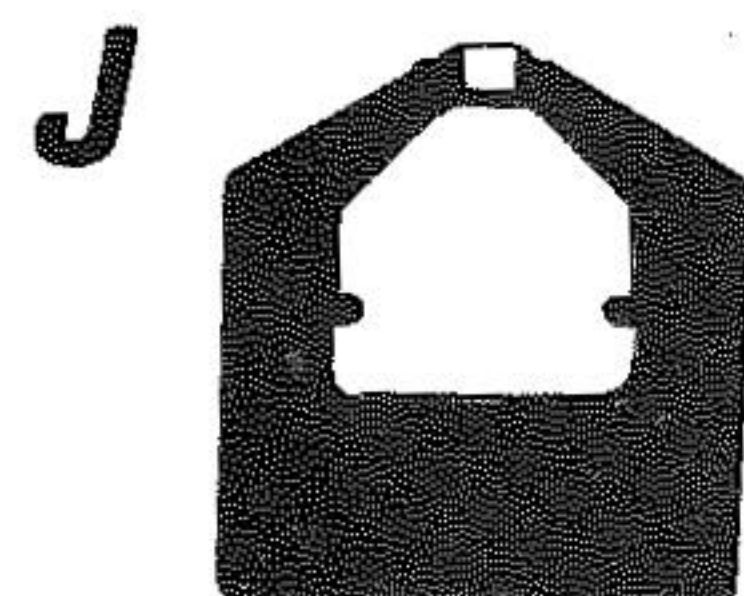
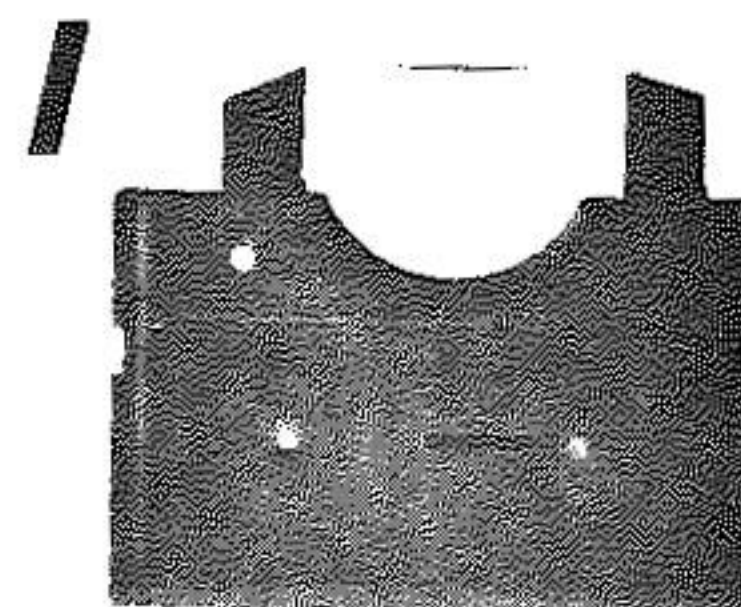
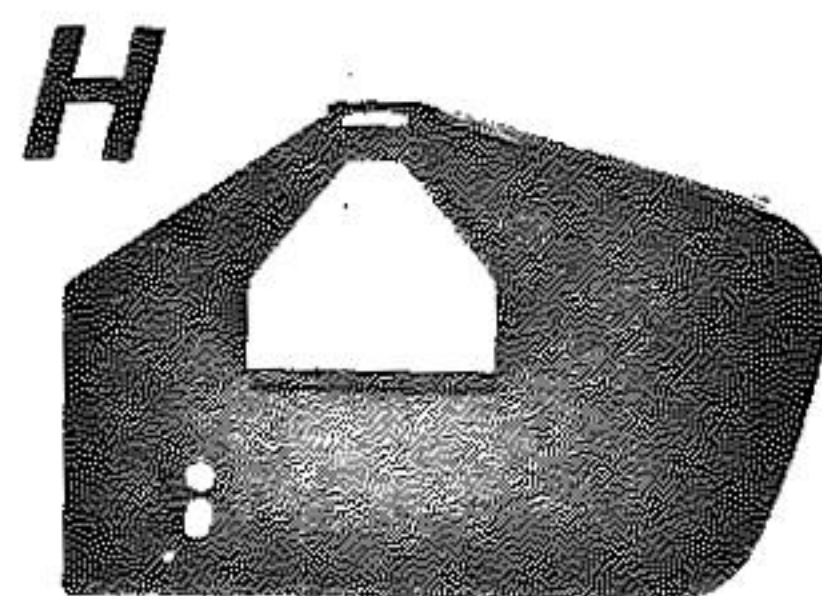
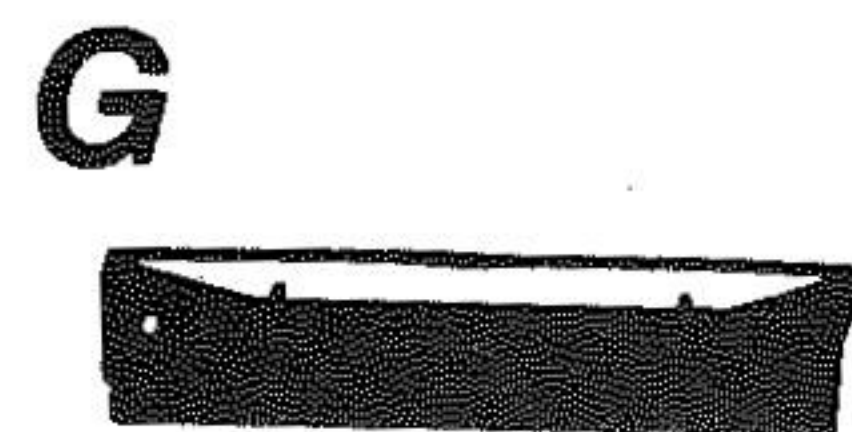
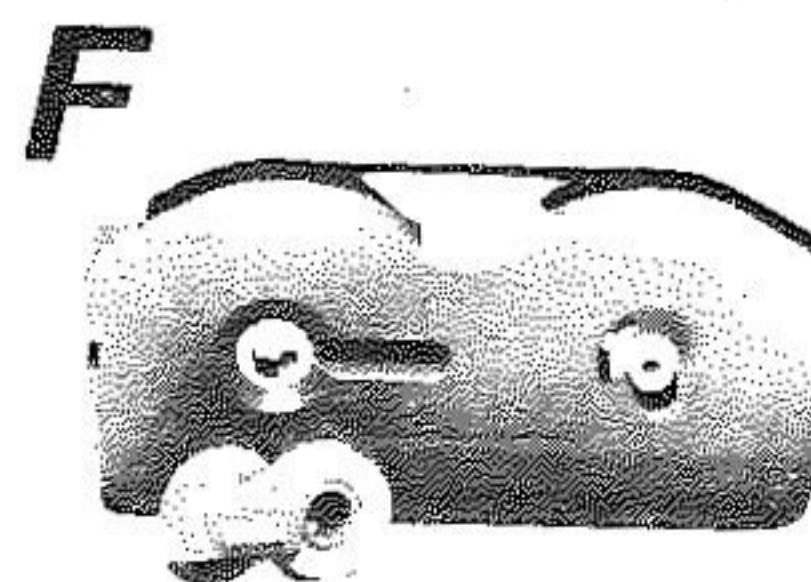
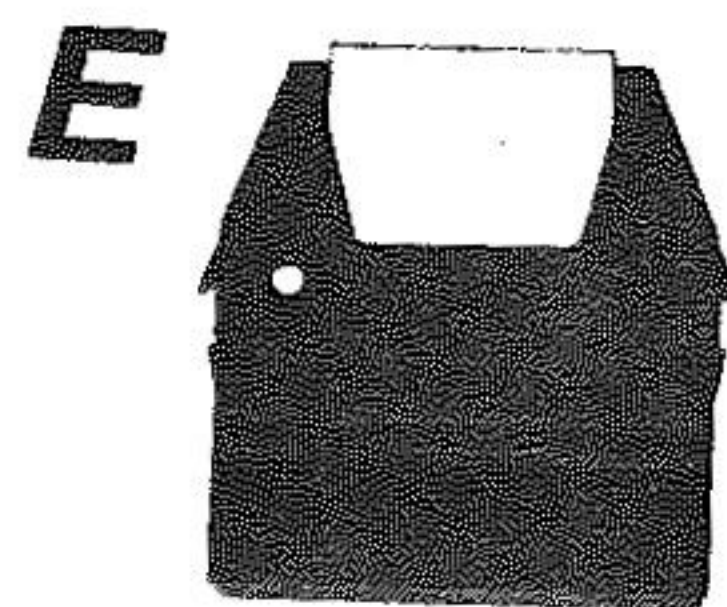
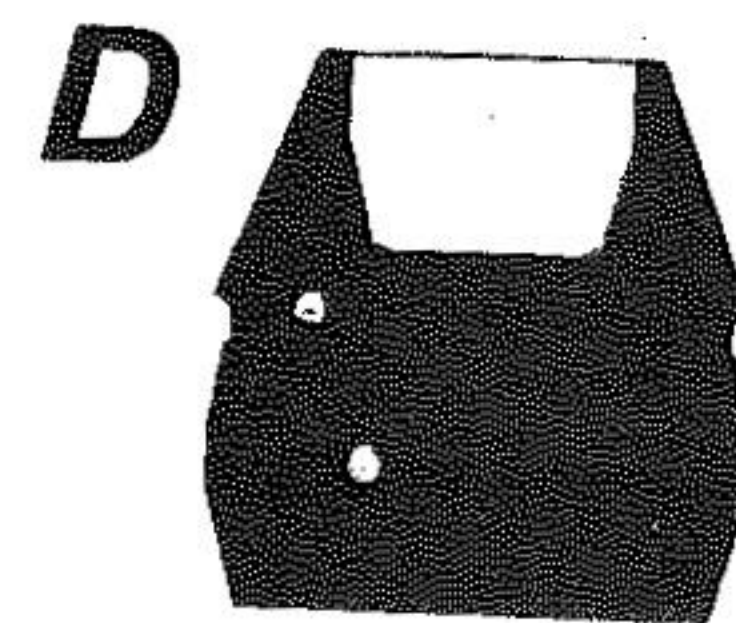
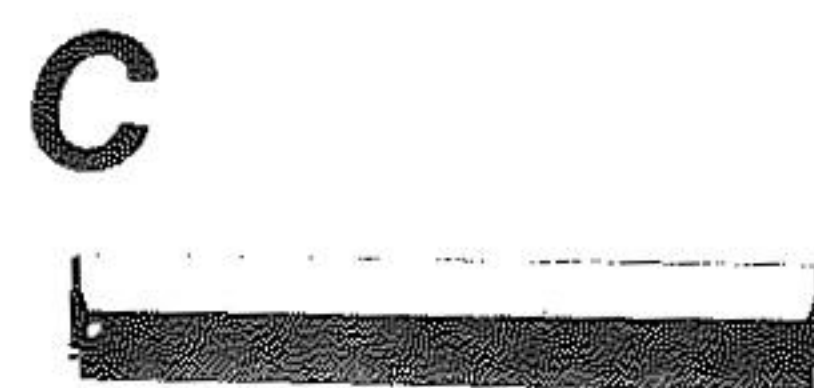
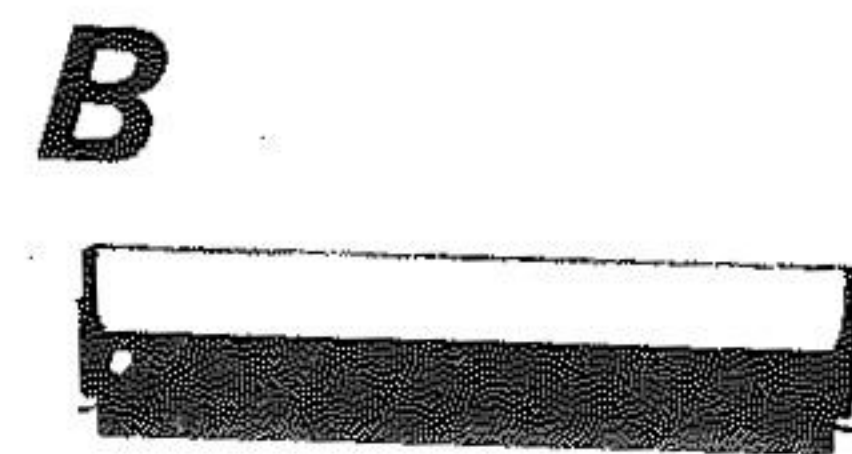
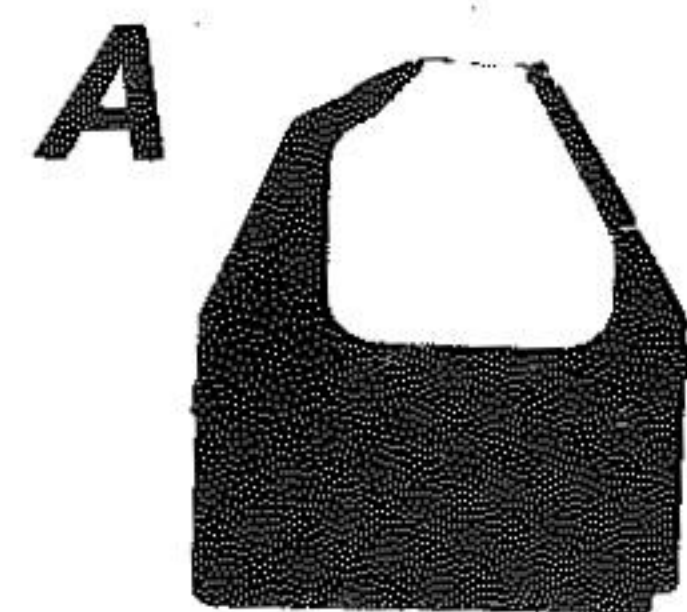
## \*\* SOUTH COAST ENTERPRISES

> TAN PLASTIC

2882	ANADIX 9500/9501	15	13
2893	BROTHER HRI	15	13
2894	CENTRONIC 730/737/739	13	11
2895	DIABLO 630	15	13
2897	EPSON MX100	15	13
2896	EPSON MX70/80	13	11
2898	IDS 440/445/460	13	11
2899	IDS 560	14	12
2901	IDS PRISM 132	14	12
2900	IDS PRISM 80	13	11
2903	NEC PC8023A	13	11
2906	OKIDATA 82/83/84	13	11
2890	SILENTYPE	8	8
2909	SMITH CORONA TP I	15	13
2902	TALLY 1605/1705/1805	16	14

DISK TOO  
SHALL PASS.





## SOUND TRAPS

NMBR N ITEM

LIST AAA\$

### \*\* QUIETPRINT

ORDER DIRECT

### \*\* TRACE SYSTEMS

3194	SOUNDRAP & STAND/BOCOL PRINTER	129	101
3195	SOUNDRAP FOR BOCOL PRINTER	109	95

### \*\* VAN SAN

2632	AXIOM IMP-5/6P-100	195	150
3423	C ITOH STARWRITER	450	338
3418	CENTRONICS 122/152/739	230	177
2633	CENTRONICS 737/159	195	150
3427	DEC LA34/38	450	338
3426	DEC LA36/LS120	395	296
2634	DEC LA50	195	150
3419	DIABLO 31/32	230	177
3425	DIABLO 630 W/SHEET FEEDER	495	371
3424	DIABLO 630RD	450	338
3420	EPSON MX100	230	177
2635	EPSON MX70/MX80	195	150
3428	FACIT 4540/4526/DATARDYAL 5000	450	338
3429	IDS 560 LINE	450	338
2636	IDS MICRO PRISM	195	150
3430	MANNSEMAN TALLY 1612/1602 RD	450	338
2637	NEC 8023A-C	195	150
2640	OKIDATA 80/82A	195	105
3421	OKIDATA 83/84	230	177
3416	RADIOSHACK DMP100/200/400	195	105
3422	RADIOSHACK DWP410	230	177
3415	RADIOSHACK II/IV/VII/VIII	195	105
3417	SONY SMI-7020	195	105

## TABLE STANDS

NMBR N ITEM

LIST AAA\$

### \*\* BI-TECH ENTERPRISES

CLEAR PLEXIGLAS STANDS...			
1286	LARGE SIZE-MX100+ ETC	35	26
1287	LARGE W/PAPER SHELF	50	33
1284	REGULAR SIZE-MX80 ETC	30	22
1285	REGULAR W/PAPER SHELF	45	32

### \*\* C&C CONSULTANTS

CLEAR GREEN ACRYLIC			
1311	LeSTAND LS-1 16x13x4	50	47
1312	LeSTAND LS-2 24x13x4	62	58

### \*\* DANA INDUSTRIES

1557	UNIVERSAL PRINTER STAND	80	53
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### \*\* FMJ

1789	PRINTER PAL P100 21Wx13Dx5H	40	32
1790	PRINTER PAL P700 23Wx16Dx6H	55	44
1788	PRINTER PAL P80 14Wx13Dx4H	30	24

### \*\* RING KING VISIBLES

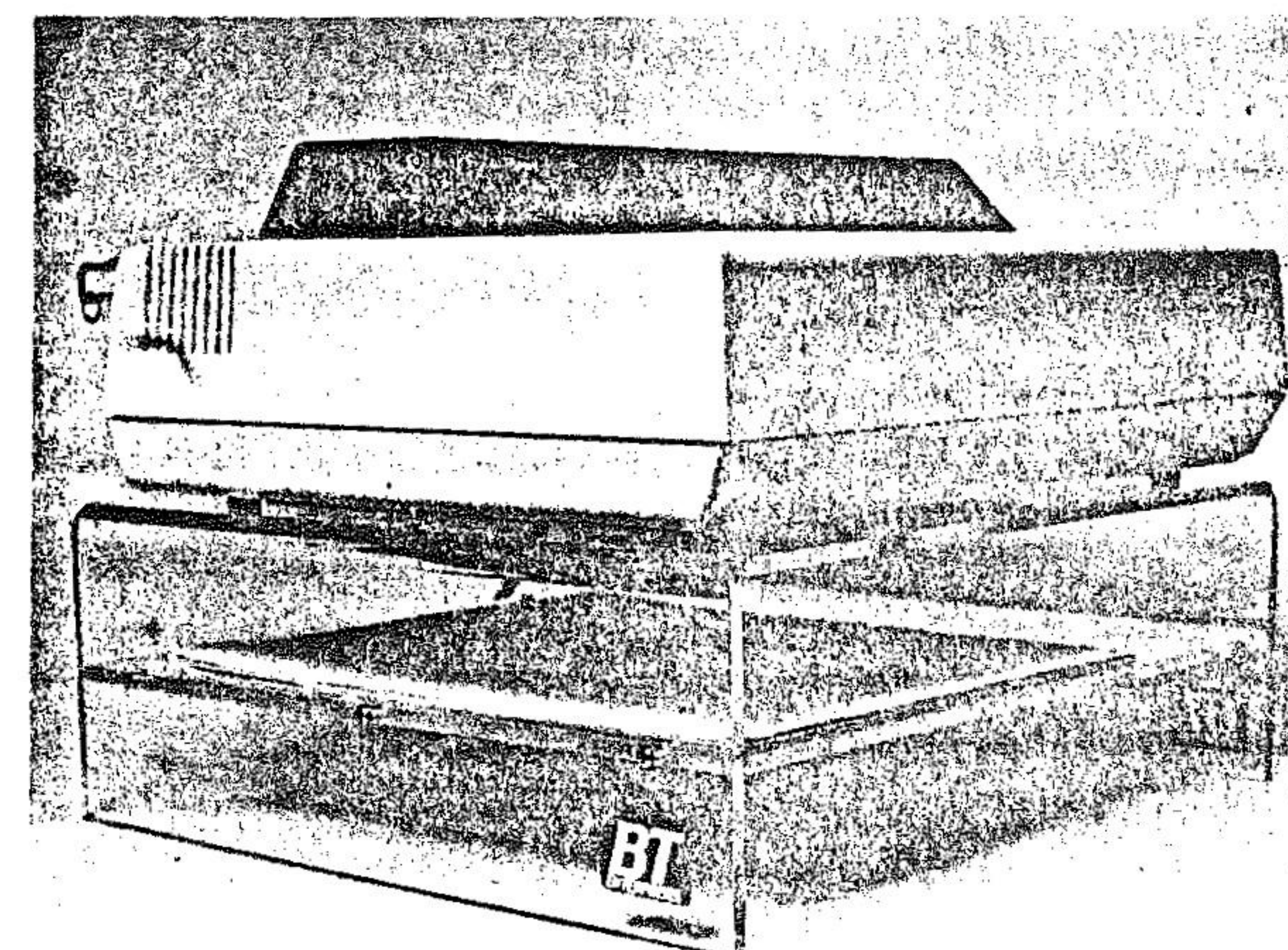
2717	BRONZE PLEXIGLAS 18Wx12Dx5H	50	33
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### \*\* SOUTH COAST ENTERPRISES

2910	SMOKE PLEXIGLAS 13X16	50	40
2911	SMOKE PLEXIGLAS 13X24	60	48
2912	SMOKE PLEXIGLAS 17X24	80	63

PROGRAMMING  
PAYS  
WEAKLY

Be sure you have the stand





# PLOTTERS & GRAPHIC TABLETS

NMBR N ITEM

LIST AAA\*

NMBR N ITEM

LIST AAA\*

## \*\* AMDEK

1092	AMPLOT DXY PLOTTER 4 PENS	949	679
1089	AMPLOT DXY-100 PLOTTER	749	623
1090	AMPLOT-II XY PLOTTER 6 PENS	1299	1175

## \*\* BAUSCH & LOMB/HOUSTON INSTR

1283	HIPAD DT114A PARALLEL		
1282	HIPAD DT11A PARALLEL		
1281	HIPILOT DMP-29 SERIAL	1995	1781
1280	HIPILOT DMP-40 SERIAL	995	910

## \*\* BMC USA

1298	X-Y PLOTTER PARALLEL B1000	999	927
1297	X-Y PLOTTER SERIAL B1000	1250	1042

## \*\* KOALA TECHNOLOGIES

1988	GRAPHICS TABLET & SOFTWARE	125	94
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## \*\* STROBE

3020	GRAPHICS PLOTTER M100 PARALLEL	649	520
3016	GRAPHICS PLOTTER M100 SERIAL	699	560
3015	^BUSINESS GRAPHIC SOFTWARE	145	121
3021	^DIFLOT-VISICALC LINE CHARTS	50	50
3017	^PARALLEL CARD-APPLE II	85	72
3022	^SCREEN DUMP PIXEL BY PIXEL	75	74
3019	^SERIAL CABLE RS232	35	30
3023	^SERIAL CARD RS232	195	160
3018	^STROBEVIEW GRAPHIC SOFTWARE	75	64

## \*\* ENTER COMPUTER

1719	>SWEET-P PLOTTER PARALLEL	795	61
1726	APPLE CABLE	40	3
1720	APPLE INTERFACE	85	7
1721	BPS BUSINESS GRAPHICS	175	16
1728	GRAPH PAPER 1-100 SHEET PAC	8	
1724	GRAPH PAPER 6-100 SHEET PACS	45	3
1734	PENHOLDER SPC 8	3	
1730	PENS BLACK 4 PAC	10	
1732	PENS COLOR TRANSPARENCIES 4 PAC	13	1
1731	PENS COLORS 4 PAC	10	
1723	PENS COLORS 6 PAC	58	4
1722	PENS TRANSPARENCIES 4 COLORS	77	64
1733	PENS TRANSPARENCIES 4 PAC	13	12
1727	PIK DISK		
1729	TRANSPARENCIES 1-10 SHEET PAC	30	24
1725	TRANSPARENCIES 6-25 SHEET PACS	180	150

## \*\* VERSA COMPUTING

3248	VERSAWRITER GRAPHICS TABLET	299	261
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## \*\* YOKOGAWA

3389	GM2000 GRAPHMATE II	2950	
3391	MICRO-DISC 5 PCS/SET	44	
3390	MICRO-DISC UNIT	985	
3387	PL1000 X-Y PLOTTER RS232 W/GRAPH	1365	
3388	PL2000 X-Y PLOTTER RS232 W/GRAPH	2265	

# DISKETTES 5-1/4"

If a new disk bought from 3A is faulty on EITHER side we will replace it or refund your money! Multiply the price shown for one disk by the quantity you want.

Order only in multiples of 10 disks. Mix any brands or types of 5-1/4" disks to attain the quantity price.

BULK means new disks with reinforced hub and envelopes, but without label or box.

HR means Reinforced Hub (Hub Ring).

\* Ten (10) disks in plastic box. (Not the usual 'library box'.)

\* Verex -23862 are designed for Apple only. While supply lasts.

Single/Double Density means 35 or 40 Tracks at 48 TPI.

Quad Density means 77 Tracks at 100 TPI and 80 Tracks at 96 TPI.

Double Side disks are designed for disk drives with two (2) Read/Write Heads.

Quad Density & Double Density disks are designed for disk drives with special Read/Write Heads.

Any Single, Double or Quad Density disk, Single or Double Sided disk, and Soft or Hard

Sectored disk is suitable for use in Apple Disk II drives!

REVERSIBLE (Flippy) means the 5-1/4" disk is notched on both edges and certified for use

on both sides in Apple compatible disk drives!

Disks are arranged by price-lowest to highest.

NMBR	SINGLE SIDE - SINGLE DENSITY	10-90	100+	200+	400+	800+	1000+
3471	Opus 501 HR BULK (formerly Media)	1.55	1.50	1.45	1.40	1.35	1.30
3472	Wabash M11A211X HR BULK	1.60	1.55	1.50	1.45	1.40	1.35
3473	Wabash M11A211X HR	1.65	1.60	1.55	1.50	1.45	1.40
3474	Sentinel 55-11 HR	1.75	1.70	1.65	1.60	1.55	1.50
3475	Elephant 111X HR BULK (EMS 1)	1.75	1.70	1.65	1.60	1.55	1.50
3476	Elephant EMS 1 HR	1.85	1.80	1.75	1.70	1.65	1.60
3476	BASF - Orange Box	1.90	1.85	1.80	1.75	1.70	1.65
3477	Opus 501 HR	2.10	2.05	2.00	1.95	1.90	1.85
3478	Athana 474001 HP	2.15	2.10	2.05	2.00	1.95	1.90
3479	Omni 511 HR	2.20	2.15	2.10	2.05	2.00	1.95
3480	Verbatim Verex MD200-01-23534 HR	2.15	2.10	2.05	2.00	1.95	1.90
3480	* Verbatim Verex MD200-01-23862 HP	2.15	2.10	2.05	2.00	1.95	1.90
3481	UltraMagnetics 50001 HR	2.35	2.30	2.25	2.20	2.15	2.10
3482	Dysan 104/1	3.35	3.30	3.25	3.20	3.15	3.10
3483	Dysan 104/1 HR	3.40	3.35	3.30	3.25	3.20	3.15

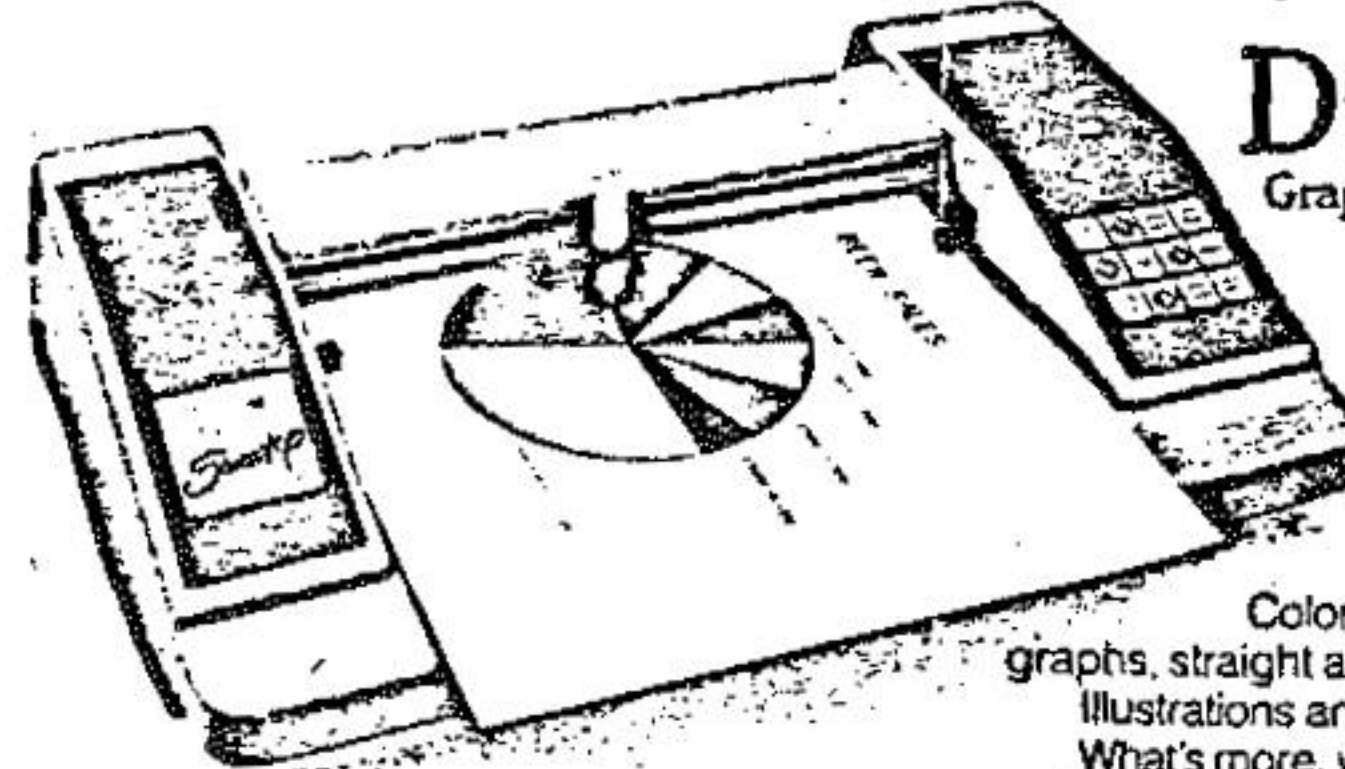
NMBR	SINGLE SIDE - DOUBLE DENSITY	10-90	100+	200+	400+	800+	1000+
3484	Syncom 15353 HR	1.85	1.80	1.75	1.70	1.65	1.60
3485	UltraMagnetics 51401 HR BULK	1.90	1.85	1.80	1.75	1.70	1.65
3486	Sentinel 55-12 HR	1.95	1.90	1.85	1.80	1.75	1.70
3487	Wabash M13A211X HR	1.95	1.90	1.85	1.80	1.75	1.70
3488	BASF 54968 HR Orange Box	2.00	1.95	1.90	1.85	1.80	1.75
3489	Elephant 222X HR BULK (EMS 2)	2.00	1.95	1.90	1.85	1.80	1.75
3490	Opus 520-01 HR	2.10	2.05	2.00	1.95	1.90	1.85
3491	Elephant EMS 2 HR	2.15	2.10	2.05	2.00	1.95	1.90
3492	Scotch/3M 00230 (formerly 744D) HP	2.15	2.10	2.05	2.00	1.95	1.90
3493	Accutrack 5520 HR	2.20	2.15	2.10	2.05	2.00	1.95
3496	Omni 521 HR	2.25	2.20	2.15	2.10	2.05	2.00
3497	Athana 474001	2.30	2.25	2.20	2.15	2.10	2.05
3499	Verbatim MD525-01-18158 HR	2.35	2.30	2.25	2.20	2.15	2.10
3502	* Verbatim MD525-01-18161 HR	2.50	2.45	2.40	2.35	2.30	2.25
3500	UltraMagnetics 51401 HR	2.45	2.40	2.35	2.30	2.25	2.20

80

CONTINUED ON NEXT PAGE!

First  
There Was  
Word  
Processing.

Introducing the Sweet-P  
Personal Plotter. Because a Picture  
Is Worth a Thousand Words.



Draw on Sweet-P  
for Your Every  
Graphic Need.

Sweet-P draws superior hard copy graphics with super-fine plotting resolution and line quality. Virtually every graphic format you will ever need is provided.

Colorful pie charts, bar graphs, straight and curved line graphs. Illustrations and alphanumeric labeling. What's more, with commercial graphics software, mountains of statistics from Visi-Calc®, SuperCalc®, and DIF® files can be reduced to clear, concise business graphs. On plain bond paper. On overhead transparency material. In just a few minutes.

And once stored in memory, any graph can be edited and redrawn with a few simple keystrokes.

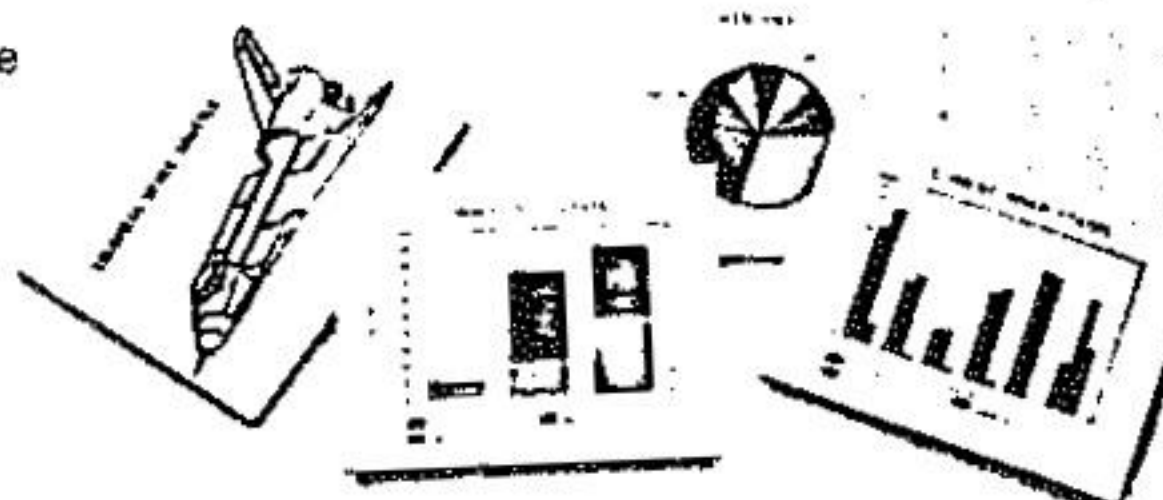
But there's more. Graphic and engineering symbols that you frequently use may be programmed into memory and recalled with a keystroke. Your company trademark, for example, is easily drawn with the intelligence of Sweet-P performance.

Your Sweet-P Personal Plotter for graph processing, engineering graphics, and overhead transparencies.

And all for \$795.

We've not only made the incomparable Sweet-P Personal Plotter very affordable, but also very easy to use. Hook-up to your personal or small business computer is smooth and convenient. And learning how to use the full range of Sweet-P capabilities is a snap. In fact, Sweet-P has been considerably designed to complement first-time plotter users—even if they never have seen a computer before.

Sweet-P is a high-speed, high quality graphics department right at your fingertips. And, it has a price tag that's easy to live with.



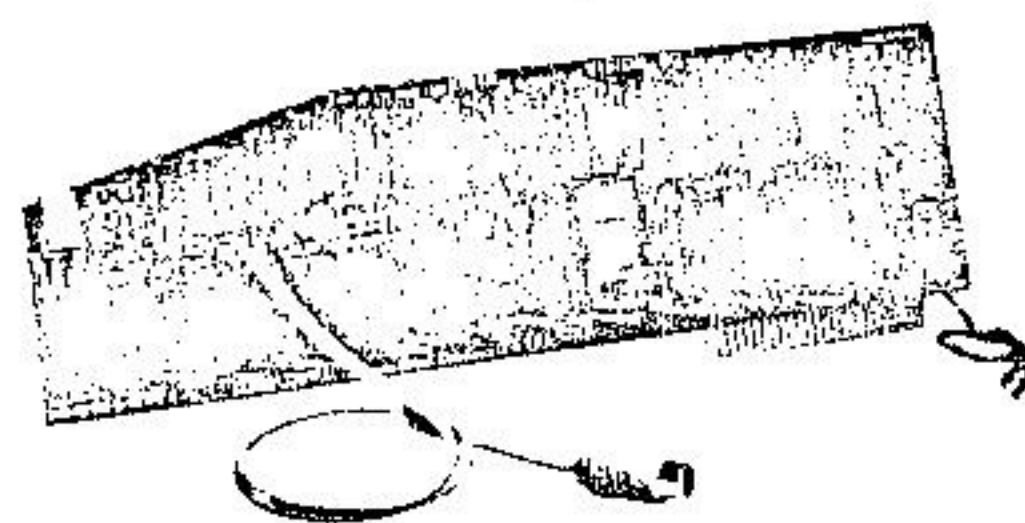






Vista

## VISION 80<sup>®</sup> Video Display Card



- Full upper and lower case character capability with 3 dot descenders
- 9x10 dot matrix per line U.S. (9x11 Europe)
- 128 ASCII character set
- BASIC, FORTRAN and Pascal languages supported
- Z80<sup>™</sup> and CP/M<sup>™</sup> compatible
- Compatible with all standard Apple<sup>™</sup> peripherals
- Shift and lock for upper and lower case
- Source switches between 40x24 and 80x24 software and hardware
- Rated #1 video card by Softalk and Call Apple

3305

241

## MODEL 150<sup>®</sup> Type Ahead Buffer



3303

331

- Up to 40 character type ahead capability
- Enter commands or data while your Apple is processing previous instructions
- Compatible with all Apple computers, keyboards and software
- No cuts — no jumpers — no software patches required
- Includes complete instructions for quick and easy installation



## NIBBLING TOOL

This Nibbling Tool is perfect for cutting, trimming, or notching sheet metal up to 18 gauge. It operates like a punch and die and also works well on aluminum or plastic up to 1/16" thick. This tool can be a real time-saver for our customers when working on chassis, printed circuit boards and prototype model parts. Size: 6-1/2"

Nibbling Tool ..... \$8

## LEMON LIME, etc.

### ELECTRONIC PROTECTION DEVICES

AC Power Line Filters with 3 to 6 outlets that fit into any standard three-wire duplex outlet plug. This is the most convenient solution to surge protection for your computer.

P/N	DESCRIPTION	LIST
PLUM	3 Outlets Wall Plug	\$49.50
LEMON	6 Outlets Wall Plug	59.95
LIME	Lemon w/5' Cord & Switch	89.50
ORANGE	Lime w/EMI/RFI	139.95
PEACH	6 Outlets w/EMI/RFI	97.50

DAVONG  
Systems, Inc.

## 16K Card Special \$4

### FEATURES

- 16K byte memory expansion card for the Apple<sup>™</sup> Computer.
- Completely compatible with Apple Computer software and hardware.
- Runs at the same speed as Apple memory products.

### DSI-A16 INSTALLATION INSTRUCTIONS

#### ► TURN THE POWER OFF

Since you will need to go inside your APPLE it is important for your safety and integrity of the devices inside the APPLE that the power be off when removing or installing any component.

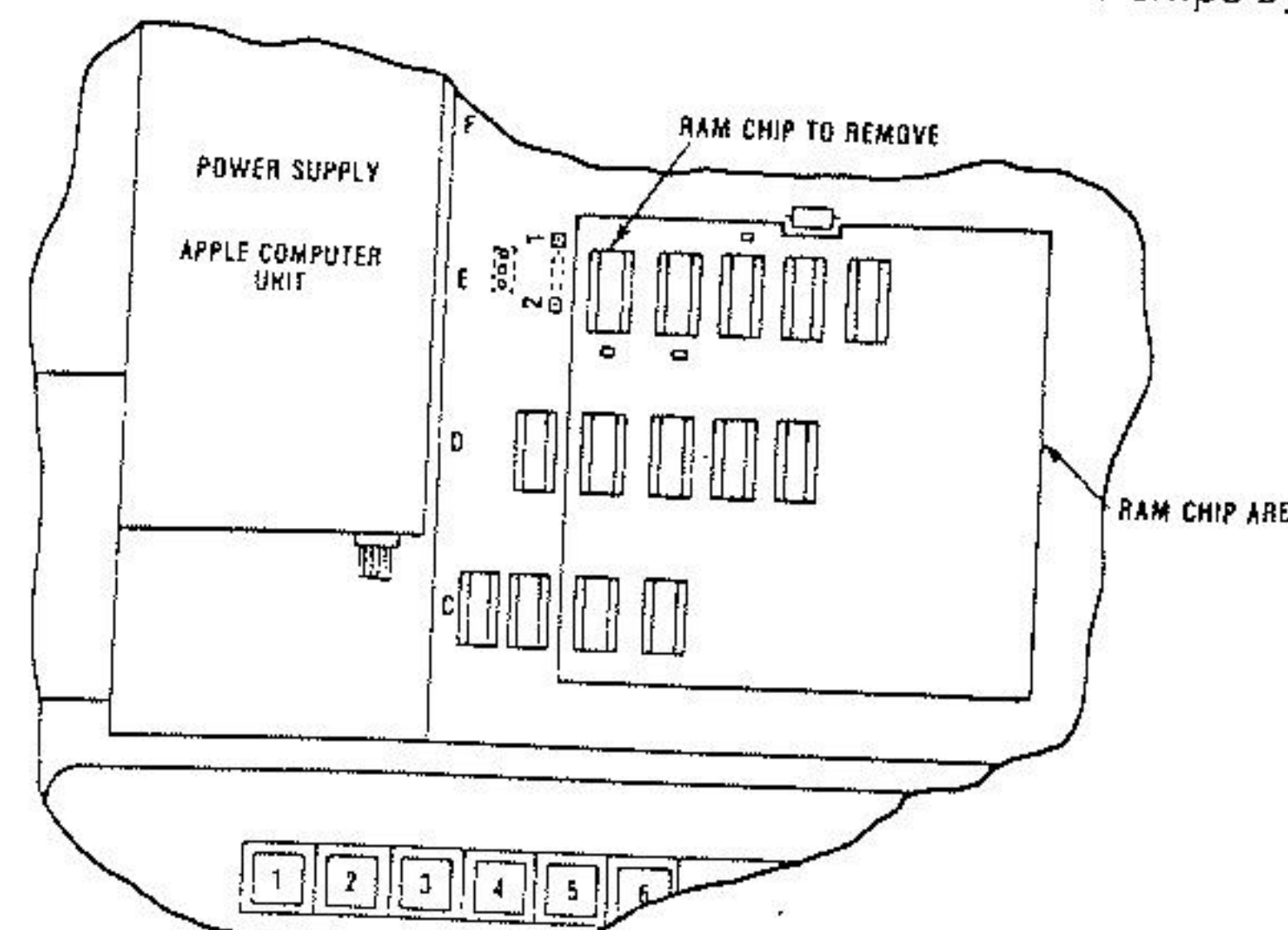
#### ► REMOVE THE COVER FROM YOUR APPLE

The cover of the APPLE is fastened with plastic snaps at the back edge and under the front edge. To remove the cover pull up firmly on the rear edge. When the snaps release be careful that the edge you're holding does not rise more than one inch.

Slide the cover toward the rear of your APPLE to expose the interior.

#### ► REMOVING A CHIP

Installation of DSI-A16 requires that one of the chips in the APPLE be removed. locate the chip look inside your APPLE and locate a large white or gold square on circuit board. This square is about 4"x4" and surrounds an area 8 chips by 3 chips. See figure 1.



## 16K Card Special 40\$

## DISKETTES 5-1/4" Continued

NMBR	SINGLE SIDE - DOUBLE DENSITY	10-90	100+	200+	400+	800+	1000+
3495	Memorex 3481 HR (Sale thru Jan 84!)	2.25	2.20	2.15	2.10	2.05	2.00
3501	Memorex 3481 HR	2.45	2.40	2.35	2.30	2.25	2.20
3494	BASF 54974 HR Qualimetric	2.45	2.40	2.35	2.30	2.25	2.20
3503	IBM 3451	2.60	2.55	2.50	2.45	2.40	2.35
3498	Maxell MD1-M (Sale thru Sep 30!)	2.30	2.25	2.20	2.15	2.10	2.05
3504	Maxell MD1-M	2.60	2.55	2.50	2.45	2.40	2.35
3505	TDK M1D-S	2.65	2.60	2.55	2.50	2.45	2.40
3506	Wabash M18A211X HR REVERSIBLE	2.75	2.70	2.65	2.60	2.55	2.50
3507	Opus 521-01 REVERSIBLE	2.85	2.80	2.75	2.70	2.65	2.60
3508	Memorex 3480 HR (Sale thru Jan 84!)	2.65	2.60	2.55	2.50	2.45	2.40
3508	Memorex 3480 HR REVERSIBLE	2.90	2.85	2.80	2.75	2.70	2.65
3509	Omni 551 REVERSIBLE	3.20	3.15	3.10	3.05	3.00	2.95
3510	Dysan 104/1D	3.50	3.45	3.40	3.35	3.30	3.25
3511	Verbatim Optima XL614-01 HR	4.70	4.65	4.60	4.55	4.50	4.45

NMBR	SINGLE SIDE - QUAD DENSITY	10-90	100+	200+	400+	800+	1000+
3180	Opus 545-01 HR	2.45	2.40	2.35	2.30	2.25	2.20
3181	Sentinel 58-14 HR	2.45	2.40	2.35	2.30	2.25	2.20
3182	Syncom 15500 HR	2.55	2.50	2.45	2.40	2.35	2.30
3181	Elephant EMS 8 HR	2.60	2.55	2.50	2.45	2.40	2.35
3183	UltraMagnetics 51801 HR	2.75	2.70	2.65	2.60	2.55	2.50
3184	Wabash M15A211X HR	2.80	2.75	2.70	2.65	2.60	2.55
3186	Scotch/3M 746-0	3.10	3.05	3.00	2.95	2.90	2.85
3186	Verbatim MD577-01-18212 HR	3.15	3.10	3.05	3.00	2.95	2.90
3185	Omni 561 HR	3.20	3.15	3.10	3.05	3.00	2.95
3187	Maxell MD1-DD	3.25	3.20	3.15	3.10	3.05	3.00
3189	Memorex 3504 HR	3.25	3.20	3.15	3.10	3.05	3.00
3189	Dysan 204/1D	4.15	4.10	4.00	3.95	3.90	3.85

NMBR	DOUBLE SIDE - DOUBLE DENSITY	10-90	100+	200+	400+	800+	1000+
3166	Sentinel 58-22 HR	2.45	2.40	2.35	2.30	2.25	2.20
3166	Syncom 15400 HR	2.55	2.50	2.45	2.40	2.35	2.30
3167	Sentinel 5FD-22 HR REVERSIBLE	2.60	2.55	2.50	2.45	2.40	2.35
3165	Elephant EMS 5 HR	2.65	2.60	2.55	2.50	2.45	2.40
3173	BASF 54624 HR Orange Box	2.70	2.65	2.60	2.55	2.50	2.45
3167	Wabash M14A211X HR	2.80	2.75	2.70	2.65	2.60	2.55
3168	Opus 535-01 HR	2.85	2.80	2.75	2.70	2.65	2.60
3170	Scotch/3M 745-ORH HR	2.95	2.90	2.85	2.80	2.75	2.70
3174	Verbatim MD550-01-18188 HR	3.15	3.10	3.05	3.00	2.95	2.90
3171	Omni 531 HR	3.20	3.15	3.10	3.05	3.00	2.95
3174	BASF 54980 HR Qualimetric	3.25	3.20	3.15	3.10	3.05	3.00
3172	IBM 3450	3.25	3.20	3.15	3.10	3.05	3.00
3169	Memorex 3491 HR (Sale thru Jan 84)	2.95	2.90	2.85	2.80	2.75	2.70
3175	Memorex 3491 HR	3.25	3.20	3.15	3.10	3.05	3.00
3176	UltraMagnetics 52401 HR	3.65	3.60	3.55	3.50	3.45	3.40
3175	Maxell MD2-DM	3.85	3.80	3.75	3.70	3.65	3.60
3177	TDK M2D-S	3.85	3.80	3.75	3.70	3.65	3.60
3178	Dysan 104/2D	4.10	4.05	4.00	3.95	3.90	3.85
3179	Verbatim Optima XL624-01 HR	5.95	5.90	5.85	5.80	5.75	5.70

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# DISKETTES 5-1/4" Continued

NMBR	DOUBLE SIDE - QUAD DENSITY	10-90	100+	200+	400+	800+	1000+
3190	Sentinel 55-24 HR	3.15	3.10	3.05	3.00	2.95	2.90
3190	Elephant EMS 10 HR	3.15	3.10	3.05	3.00	2.95	2.90
3191	Opus 555-01 HR	3.20	3.15	3.10	3.05	3.00	2.95
3192	Syncom 15600 HR	3.25	3.20	3.15	3.10	3.05	3.00
3194	Maxell MD2-DD	3.90	3.85	3.80	3.75	3.70	3.65
3195	Omni 571	3.90	3.85	3.80	3.75	3.70	3.65
3199	Verbatim MD557-01-18239 HR	3.90	3.85	3.80	3.75	3.70	3.65
3196	UltraMagnetics 52801 HR	3.95	3.90	3.85	3.80	3.75	3.70
3197	Wabash M16A211X HR	4.00	3.95	3.90	3.85	3.80	3.75
3198	Scotch 3M/747-0	4.00	4.05	4.00	3.95	3.90	3.85
3199	Memorex 3501 HR	4.15	4.10	4.05	4.00	3.95	3.90
3200	Dysan 204/2D	4.70	4.65	4.60	4.55	4.50	4.45

# DISKETTES 8"

If a new disk bought from 3A is faulty on EITHER side we will replace it or refund your money!

Multiply the price shown for one disk by the quantity you want.

Order ONLY in multiples of 10 disks.

Mix any brands or types of 8" disks to attain the quantity price.

Single/Double Density means 35 or 40 Tracks at 48 TPI.

Double Side disks are designed for disk drives with two Read/Write Heads.

HR means Reinforced Hub (Hub Ring).

Very few 8" disks are in stock. Expect 2-3 weeks delivery time.

Disks are arranged by price-lowest to highest.

NMBR	SINGLE SIDE - SINGLE DENSITY	10-90	100+	200+	400+	800+	1000+
3515	BASF 53428	2.15	2.10	2.05	2.00	1.95	1.90
3516	Wabash F11	2.15	2.10	2.05	2.00	1.95	1.90
3517	Elephant EMS 80	2.20	2.15	2.10	2.05	2.00	1.95
3518	Opus 8011101 HR	2.25	2.20	2.15	2.10	2.05	2.00
3519	Sentinel 85-11C	2.30	2.25	2.20	2.15	2.10	2.05
3520	Wabash F31-32 Sector	2.30	2.25	2.20	2.15	2.10	2.05
3521	Scotch 740-0	2.40	2.35	2.30	2.25	2.20	2.15
3522	Scotch 740-32	2.40	2.35	2.30	2.25	2.20	2.15
3523	Syncom 15006 HR	2.40	2.35	2.30	2.25	2.20	2.15
3524	Memorex 3062	2.60	2.55	2.50	2.45	2.40	2.35
3525	Omni 8140	2.60	2.55	2.50	2.45	2.40	2.35
3526	Verbatim Verex FD34-1500-22991	2.60	2.55	2.50	2.45	2.40	2.35
3527	Verbatim FD34-9000-22625 HR	2.90	2.85	2.80	2.75	2.70	2.65
3528	Verbatim FD32-9000-22631 HR	2.90	2.85	2.80	2.75	2.70	2.65
3529	IBM 5830 or 5845	3.00	2.95	2.90	2.85	2.80	2.75
3530	Dysan 3740/1	3.50	3.45	3.40	3.35	3.30	3.25

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# DISKETTES 8" Continued

NMBR	SINGLE SIDE - DOUBLE DENSITY	10-90	100+	200+	400+	800+	1000+
3531	BASF 54568	2.50	2.45	2.40	2.35	2.30	2.25
3532	Opus 8012107 HR	2.65	2.60	2.55	2.50	2.45	2.40
3533	Sentinel 85-12C	2.65	2.60	2.55	2.50	2.45	2.40
3534	Syncom 15050 HR	2.70	2.65	2.60	2.55	2.50	2.45
3535	Wabash F13A2	2.75	2.70	2.65	2.60	2.55	2.50
3536	Scotch 741-0	2.85	2.80	2.75	2.70	2.65	2.60
3537	Scotch 741-32 Sector	2.85	2.80	2.75	2.70	2.65	2.60
3538	Elephant EMS 87	2.90	2.85	2.80	2.75	2.70	2.65
3539	Memorex 3090	3.10	3.05	3.00	2.95	2.90	2.85
3540	Omni 8144	3.10	3.05	3.00	2.95	2.90	2.85
3541	Verbatim FD32-8000-22616	3.20	3.15	3.10	3.05	3.00	2.95
3542	Verbatim FD34-8000-22637 HR	3.30	3.25	3.20	3.15	3.10	3.05
3543	Verbatim FD34-8000-18137	3.30	3.25	3.20	3.15	3.10	3.05
3544	Maxell FD1-128	3.45	3.40	3.35	3.30	3.25	3.20
3545	Maxell FH1-32 Sector	3.45	3.40	3.35	3.30	3.25	3.20
3546	TDK	3.90	3.85	3.80	3.75	3.70	3.65
3547	Dysan 3740/1D	4.25	4.20	4.15	4.10	4.05	4.00

NMBR	DOUBLE SIDE - SINGLE DENSITY	10-90	100+	200+	400+	800+	1000+
3548	BASF 54226 (IBM Series I)	2.15	2.10	2.05	2.00	1.95	1.90
3549	Opus 8013101 HR	2.75	2.70	2.65	2.60	2.55	2.50
3550	Scotch 740/2-0	3.55	3.50	3.45	3.40	3.35	3.30
3551	Omni 8240	3.60	3.55	3.50	3.45	3.40	3.35
3552	Verbatim FD10-4026	3.85	3.80	3.75	3.70	3.65	3.60

NMBR	DOUBLE SIDE - DOUBLE DENSITY	10-90	100+	200+	400+	800+	1000+
3553	Syncom 15103 HR	3.05	3.00	2.95	2.90	2.85	2.80
3554	BASF 54673	3.15	3.10	3.05	3.00	2.95	2.90
3555	Sentinel 85-22	3.15	3.10	3.05	3.00	2.95	2.90
3556	Opus 8013306 HR	3.20	3.15	3.10	3.05	3.00	2.95
3557	Verbatim Verex DD34-1501-24635	3.25	3.20	3.15	3.10	3.05	3.00
3558	Elephant EMS 90	3.35	3.30	3.25	3.20	3.15	3.10
3559	Wabash F14A2	3.45	3.40	3.35	3.30	3.25	3.20
3560	Scotch 743-0	3.55	3.50	3.45	3.40	3.35	3.30
3561	Memorex 3102	3.65	3.60	3.55	3.50	3.45	3.40
3562	Omni 8242	3.80	3.75	3.70	3.65	3.60	3.55
3563	Verbatim DD34-4001-18071	3.85	3.80	3.75	3.70	3.65	3.60
3564	Verbatim DD32-4000-22619	3.90	3.85	3.80	3.75	3.70	3.65
3565	Maxell FD2	3.95	3.90	3.85	3.80	3.75	3.70
3566	Maxell FH2-32 Sector	3.95	3.90	3.85	3.80	3.75	3.70
3567	IBM 6872	4.20	4.15	4.10	4.05	4.00	3.95
3568	TDK	4.30	4.25	4.20	4.15	4.10	4.05
3569	Dysan 3740/2D	4.90	4.85	4.80	4.75	4.70	4.65



# PRINTERS

NMBR N ITEM LIST AAA\$

## \*\* ANADEX

1116	ANADEX DP9000 150CPS 132COL	1725	1369
1119	ANADEX DP9000A 150CPS 80COL	1625	1333
1120	ANADEX DP9001A 120CPS 80COL	1625	1333
1128	ANADEX DP9500 150CPS 132COL	1650	1369
1117	ANADEX DP9500A 150CPS 132COL	1725	1369
1129	ANADEX DP9501 150CPS 132COL	1650	1369
1118	ANADEX DP9501A 120CPS 132COL	1725	1369
1121	ANADEX DP9620A 200CPS 132COL	1845	1524
1130	ANADEX DP9625A 200CPS 132COL	1995	1614
1122	ANADEX WP6000 275CPS 132COL	2200	2200
1123	^BUFFER 2.6K 9500/9501	75	43
1125	^BUFFER 2K 9620A	35	32
1124	^TRACTOR FEED WP6000	150	141

## \*\* AXIOM

1269	AXIOM AT100	299	281
1270	AXIOM GP100a	266	250
1271	AXIOM GP250x	339	290
2339	AXIOM IMP 4 P & S	749	589

## \*\* AXLON

1277	ALPHACOM 30CPS 40COL THERMAL	299	250
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## \*\* BMC USA

1295	B1200 DOT MATRIX	495	425
1296	B1210 INJECTION COLOR		
1300	CR1 DAISYWHEEL	995	878
1294	PB101 DAISYWHEEL	1100	817

## \*\* BROTHER/DAISYWRITER/DYNAX

1301	HR-1 DAISYWHEEL 15CPS 132COL	1150	805
1302	HR-1 DAISYWHEEL SERIAL	1250	861
3446	HR-15P	599	574
3447	HR-15S	649	610
1306	^PRINTWHEEL CASSETTE	25	22
1303	^TRACTOR FOR HR-1	175	150

## \*\* CENTRONICS

1346	GRAPHICS 122-1 120CPS PARALLEL	730	
1347	GRAPHICS 122-3 120CPS SERIAL	852	
1348	GRAPHICS 739-1 PRO SP PARALLEL	679	
1349	GRAPHICS 739-3B PRO SP SERIAL	793	

## \*\* C ITOH ELECTRONICS

1356	PRINTMASTER F10 55CPS DAISYWHEEL	1995	1668
1357	PRINTMASTER F10 SERIAL	1995	1668
1350	PROWRITER 1 8510 120CPS 80COL	595	431
1351	PROWRITER 1 8510 SERIAL	745	617
1352	PROWRITER 2 1550 120CPS 136COL	995	732
1353	PROWRITER 2 1550 SERIAL	995	793
1354	STARWRITER F10 40CPS DAISYWHEEL	1895	1190
1355	STARWRITER F10 SERIAL	1895	1190
1358	^TRACTOR STARWRITER	325	224

## \*\* COMREX INTERNATIONAL

1427	COMRITER CR1 DAISYWHEEL P OR S	1129	878
1433	^CABLE RS232	40	35
1428	^DAISYWHEEL	25	22
1434	^DUST COVER COMRITER	10	9
1431	^IBM CABLE	20	18
1432	^IBM CABLE	60	53
1435	^TRACTOR FEED	120	105

## \*\* DATA IMPACT

1559	DIP 92 80COL	695	549
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## \*\* DATASOUTH COMPUTER

1574	DS120 TERMINAL CONTROLLER	653	
1579	DS120 UPGRADES DECDRITER II		
1575	DS180 180CPS 132COL 9X7 S & P	1346	
1576	DS180 W/QUIET COVER	1463	
1578	DS220 MULTIMODE 220CPS S & P		
1577	^PARALLEL CABLE	39	

## \*\* DIABLO

1585	D-620 DAISYWHEEL 25CPS 132COL S	1195	1018
1586	D-630 KSR	3325	2647
1587	D-630 R155 40CPS S OR P	2340	1935
1599	P11 DOT MATRIX 80COL 100CPS	649	543
1600	P31 DOT MATRIX 132COL 100CPS	950	756
1601	P32 DOT MATRIX 132COL 150CPS	1395	1089
1602	P38 DOT MATRIX 132COL 400CPS	2195	1857
1588	^CABLE 630 R155/APPLE	60	57
1589	^CABLE 630 R155/RS232	60	57
1591	^PRINTWHEEL PLASTIC 620	15	14
1597	^PRINTWHEEL PLASTIC 630	9	9
1593	^SHEET FEEDER 620	895	776
1598	^SHEET FEEDER 630	1395	854
1590	^TRACTOR BIDIR 620	130	106
1594	^TRACTOR BIDIR 630	440	281

## \*\* DRESSER/HAUS COMPUTER PRODUCTS

1633	MXPLUS-EPSON ENHANCER	50	47
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## \*\* EPSON COMPUTER PRODUCTS

3399	FX100 136COL 100CPS W/GRAPHIC	899	762
1735	FX80 80COL 160CPS W/GRAPHIC	695	616
1738	MX100 136COL 100CPS W/GRAPHIC	750	706
1736	MX80 80COL 80CPS W/GRAPHIC	500	374
1737	RX80 80COL 100CPS W/GRAPHIC	499	411
2089	^FRICTION FEED KIT MX70/80	40	32
1740	^GRAFRAX+ MX100 - 3 EPROMS	70	59
1739	^GRAFRAX+ MX80 - 3 EPROMS	70	59
1744	^PARALLEL CABLE	36	32
1743	^PARALLEL CARD	85	71
1741	^ROLL PAPER HOLDER MX80FT	30	27
1742	^SHORT TEAR-OFF LID MX80FT	20	19
3400	^TRACTOR FEED FX80	31	

NMBR N ITEM

LIST AAA\$

## \*\* INTEGRAL DATA SYSTEMS

1873	MICROPRISM 480 110CPS 80COL	645	543
1874	PRISM 132 200CPS 132COL S & P	1499	1249
1875	PRISM 132C COLOR GRAPHICS	1995	1663
1882	PRISM 80 200CPS 80COL S & P	1299	1095
1883	PRISM 80C COLOR GRAPHICS	1795	1496
1879	^CABLE MP480/PRISM 132-APPLE	49	47
1894	^COLOR OPTION KIT	399	299
1893	^DOT PLOT GRAPHICS KIT	99	78
1889	^PAPER CATCH PRISM 80/132	19	19
1887	^PARALLEL CARD PRISM	52	50
1880	^PRINT SOFTWARE PRISM 80/132	60	53
1888	^SERIAL CARD B232 PRISM	40	27
1881	^SHEET FEED 200 BIN CASSETTE	499	436
1890	^SHEET FEED KIT PRISM 132	149	114
1891	^SHEET FEED KIT PRISM 80	149	114
1892	^SPRINT MODE KIT	149	114

## \*\* JUKI INDUSTRIES

1972	JUKI 6100 DAISYWHEEL 18CPS 80COL	699	531
1973	^BIDIR TRACTOR	149	135
1975	^DAISYWHEEL	20	20
1976	^MEMORY CHIP 2K	28	28
1974	^UNIDIR TRACTOR	105	101

## \*\* LEADING EDGE

2001	BP/BR 8600 80COL 180CPS 2X9	1295	1114
2000	GORILLA/BANANA 80COL 50CPS 5X7	250	224
2002	TRACTOR FOR 8600	159	128

## \*\* MANNESMAN TALLY

2052	MT160-I 160CPS 80COL S & P	698	604
2053	MT160-L 160/40CPS DUAL PRINT	798	690
2055	MT160S 200CPS 132COL SERIAL	1695	1399
2063	MT180-I 160CPS 132COL S & P	998	852
2064	MT180-L NLQ PRINT MODE	1098	938
2056	MT1802 200/50CPS DUAL PRINT PAR	1995	1643
2057	MT1805 200/50CPS DUAL PRINT SER	1995	1643
2058	MT1805 200/50CPS QUICK TEAR	2245	1857
2061	^ROLL PAPER OPTION 160	38	37
2054	^TRACTOR 160	85	73

## \*\* MPI

2207	1506	783	
2204	996	599	
2205	APPLE PAC	139	
2209	BUFFER 2K	24	
2208	EXT SERIAL OR PARALLEL	24	
2210	PAPER GUIDE	24	
2206	SINGLE SHEET FEED	24	

## \*\* NEC HOME ELECTRONICS

2220	PC 8023A 100CPS 80COL 7X9	619	436
2227	PC 8094A CABLE FOR 8023A	50	47
2228	SERIAL CARD FOR PC8023A	170	153

NMBR N ITEM

LIST AAA\$

## \*\* NEC INFORMATION SYSTEMS

3445	SPINWRITER 3350	2295	2000
2257	SPINWRITER 3510	1895	1589
2258	SPINWRITER 3515	1925	1625
2259	SPINWRITER 3520	2625	2232
2260	SPINWRITER 3525	2650	2256
2261	SPINWRITER 3530	2190	1720
2262	SPINWRITER 3550	2350	2000
2263	SPINWRITER 7710	3085	2232
2264	SPINWRITER 7715	3165	2261
2265	SPINWRITER 7720	3610	2700
2266	SPINWRITER 7725	3710	2765
2267	SPINWRITER 7730	3085	2232
2247	^3500 BIDIR TRACTOR	265	237
2248	^3500 BIN ADAPTERS-2	235	212
2249	^3500 BOTTOM FEED/PAPER OUT	90	84
2250	^3500 CUT SHEET FEEDER	1125	970
2251	^3500 CUT SHEET GUIDE	117	117
2252	^3500 ENVELOPE HANDLER	315	281
2253	^3500 PUSHER TRACTOR	415	369
2254	^7700 BIDIR TRACTOR	400	356
2255	^7700 CUT SHEET FEEDER	1400	1199
2256	^7700 VERTICAL FORMS TRACTOR	250	227

## \*\* OKIDATA

2319	MICROLINE 80 80CPS 80COL	449	369
2320	MICROLINE B2A 120CPS 80COL 9X9	549	438
2321	MICROLINE B3A 120CPS 136COL	899	732
2322	MICROLINE B4P 200CPS 136COL	1395	1084
2323	MICROLINE B4S SERIAL	1495	1190
2324	MICROLINE 92 160CPS 80COL	699	556
2341	MICROLINE 92S SERIAL	799	641
2325	MICROLINE 93 160CPS 136COL	1249	957
2342	MICROLINE 93S SERIAL	1349	1042
2334	PACEMARK 2350P 350CPS 136COL	2685	2125
2335	PACEMARK 2350S 350CPS 136COL	2845	2310
2336	PACEMARK 2410 410CPS PARALLEL	2995	2353
2337	PACEMARK 2410 410CPS SERIAL	3145	2588
2330	^GRAPHIC DRIVER DISK	65	59
2332	^HIGH SPEED 2K BUFFER 82/83/84	130	128
2333	^HIGH SPEED 2K BUFFER 92/93	114	104
2328	^OKIGRAPH I B2A-2 PROMS	49	33
2338	^OKIGRAPH I B3A-2 PROMS	49	33
2329	^OKIGRAPH II DISK	65	59
2340	^PARALLEL IEEE488 OPTION	99	91
2331	^ROLL PAPER FEED	49	33
2326	^RS232 CARD 2K-82/83/92/93	140	128
2327	^TRACTOR-B0/82A/92	65	53

## \*\* PANASONIC

2395	KX-P1090 FT 10-17 CPS	550	413
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## \*\* PFENYAN KAPPA INTERNATIONAL

2521	PRINTER 80COL	400	
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# PRINTERS

NMBR	N	ITEM	LIST	AAA\$
** DUME				
2642		SPRINT 11/40+ DAISYWHEEL	1681	1452
2646		SPRINT 9/35 DAISYWHEEL SERIAL	2270	2088
2644		SPRINT 9/45 DAISYWHEEL SERIAL	2255	1726
2645		SPRINT 9/55 DAISYWHEEL SERIAL	2795	2465
2650		^PARALLEL CARD FOR 11/40+	95	94
2648		^PRINTWHEEL	10	8
2643		^SERIAL CARD FOR 11/40+	95	90
2649		^SHEET FEEDER FOR 9/45 & 11/40+	950	679
2647		^TRACTOR 11/40+, 9/35/45/55	210	199
		<i>Specify Parallel or Serial</i>		72
** RING KING VISIBLES				
2714		PRINTWHEEL BINDER 8 DUME STYLE	8	7
2715		PRINTWHEEL BINDER 9 RICOH STYLE	8	7
2716		THIMBLE BINDER 6 NEC STYLE	8	7
** SANYO				
2783		PR5500 DAISYWHEEL 16CPS 132COL P	995	735
2789		SANYO PRINTWHEEL 5 PAC	84	84
** SELECTONE COMPUTER PRODUCTS				
2818		APPLE II PARALLEL CARD & CABLE	95	83
2821		CABLE FOR APPLE/SPECIFY CARD	39	36
2823		CABLE FOR EAGLE II/III	39	36
2824		CABLE FOR IBM PC SERIAL/PARALLEL	39	36
2822		CABLE FOR VIC 64/CARDCO	39	36
		CARD KITS FOR PRAXIS 30/35/40		
2820		MICRO-TYPE PARALLEL CARD & CABLE	195	165
2819		MICRO-TYPE SERIAL CARD & CABLE	195	165
2815		MICRO-TYPER SYSTEM PRAXIS 30P	695	623
2814		MICRO-TYPER SYSTEM PRAXIS 30S	695	623
2817		MICRO-TYPER SYSTEM PRAXIS 35P	795	735
2816		MICRO-TYPER SYSTEM PRAXIS 35S	795	735
		S OR P MEANS SERIAL OR PARALLEL		
** SMITH CORONA				
2831		DAISYWHEEL	5	5
2826		TP-I DAISYWHEEL 10PITCH 12CPS	895	556
2827		TP-I DAISYWHEEL 10PITCH SERIAL	895	556
2832		TP-I DAISYWHEEL 12PITCH 12CPS	895	648
2833		TP-I DAISYWHEEL 12PITCH SERIAL	895	648
2828		TRACTOR FOR TP-I	149	144
** STAR MICRONICS				
2983		GEMINI 10X 120CPS 80COL 9X9 PAR	399	350
2984		GEMINI 15 120CPS 132COL 9X9	599	436
** TOSHIBA				
3188		AUTO SHEET FEEDER	1395	1163
3187		BI-DIR TRACTOR	295	256
3185		P1350 100-160 CPS PARALLEL	2195	1804
3186		P1350 SERIAL	2195	1804

NMBR	N	ITEM	LIST	AAA\$
** TRANSTAR				
3467		TRANSTAR 120 DAISY 14CPS 12"	599	517
3206		TRANSTAR 130 DAISY 18CPS 17"	895	762
3207		TRANSTAR 130 DAISY SERIAL	950	811
3209		TRANSTAR 140 DAISY 40CPS SERIAL	1695	1321
3213		TRANSTAR 315 COLOR 50CPS 80COL	599	517
3208		^BIDIR TRACTOR FOR 130	195	135
3210		^BIDIR TRACTOR FOR 140	225	203
3468		^BUFFER 2K FOR 140	40	33
3470		^PARALLEL CABLE 10' MALE/MALE	35	28
3214		^PARALLEL CARD FOR APPLE & 315	99	90
3217		^PRINTWHEEL 130	18	17
3469		^SHEET FEEDER FOR 140	1075	902
** TRENDCOM				
3224		TRENDCOM 100/200 CARD	75	69
3225		TRENDCOM 100/200 GRAPHICS CARD	100	91
3222		TRENDCOM 1006 40CPS 40COL THERML	295	259
3228		TRENDCOM 200 220VAC	395	344
3223		TRENDCOM 200 40CPS 80COL THERMAL	395	344
** XEROX				
3385		XEROX 620 20CPS 132COL SERIAL	1595	1304
3384		XEROX 630 40CPS 132COL SERIAL	2900	2494
3386		^TRACTOR RUTISHAUSER	295	250
** ADVANCED LOGIC SYSTEMS				
1063		DISPATCHER-SERIAL CARD	139	84
1064		PRINTERMATE-PARALLEL CARD	99	59
** CALIFORNIA COMPUTER SYSTEMS				
1333		CENTRONICS CABLE 7379A	20	19
1332		CENTRONICS ROM 7620A	30	28
1335		GP1B INTERFACE 7490A	200	179
1334		MPI 88T CABLE 7388A	30	28
1322		PARALLEL CARD 7720-01	100	91
1323		PARALLEL CARD 7720-02	100	91
1324		PARALLEL CARD CENTRONICS 7729A	100	91
** COMPUTER STATIONS				
1420		STATION MASTER PARALLEL CARD	175	146
** DIGITEK INTERNATIONAL				
1606		PRINTMASTER 3 PARALLEL/CARD/CABLE	179	169
1607		PRINTMASTER 3 SERIAL CARD/CABLE	170	163
** FOURTH DIMENSION SYSTEMS				
1793		PARALLEL INTERFACE & CABLE	59	44

## PRINTER CARDS & CABLES

# PRINTER CARDS & CABLES

NMBR	N	ITEM	LIST	AAA\$
** ORANGE MICRO				
2348		GRAPPLER+ ANADEx/APPLE/CENTRONIC	165	135
2350		GRAPPLER+ CITO/PROWRTR/OKIDATA	165	135
2349		GRAPPLER+ EPSON/DATASOUTH/NEC	165	135
2352		GRAPPLER+ IDS 560/460	175	141
2351		GRAPPLER+ IDS PRISM/MIRCOPRISM	175	141
2356		ORANGE PARALLEL CARD	90	72
2354		^BUFFERBOARD 16K ADD ON RAM	30	27
2353		^BUFFERBOARD FOR GRAPPLER+ 16K	165	135
2355		^BUFFERED GRAPPLER+	239	199
** PROMETHEUS PRODUCTS				
2565		GRAPHITTI CARD-EPSON 80/100	125	94
2566		GRAPHITTI CARD-NEC/PROWRITER	125	94
2567		GRAPHITTI CARD-OKIDATA	125	94
2568		PARALLEL CARD & CABLE PRT1	99	59
2584		^CABLE CENTRONICS PARALLEL	25	24
2585		^CABLE IDS PAPER TIGER	30	28
** QUADRAM				
2598		CABLE 8' CENTRONICS PLUG	45	45
2599		PARALLEL CARD & CABLE	140	121
2596		PARALLEL CARD APIC	95	78
2597		PARALLEL CARD W/GRAPHICS APIC/G	95	78
** SPIES LABORATORIES				
2927		SUPER-MX CARD & CABLE	175	157
2928		^DRATOR & LTR GOTHIC FONTS	30	28
2929		^SCRIPT & OLDE ENGLISH FONTS	30	28
** SSH MICROCOMPUTER PRODUCTS				
2959		CABLE F/NEC & ASIO/AIDII, ASC05	25	24
2958		CABLE FOR AIO/AIOII/APIO, ASC04	30	28
2944		CABLE FOR AIOII, ASC01	20	19
2961		CABLE FOR AIOII/APIO CENT 7XX	35	33
2960		CABLE FOR AIOII/APIO UNTER 727	15	14
2945		CABLE FOR AIOII/APIO, APC02	25	24
2956		CABLE FOR AIOII/ASIO, ASC02	25	24
2957		CABLE FOR AIOII/ASIO, ASC03	25	24
2946		CABLE FOR IDS PRINTER, APC04	25	24
2962		IEEE 488 CARD & CABLE A488	475	444
2963		IEEE 488 PASCAL DRIVER DISK	50	44
2941		PARALLEL CARD FIRMWARE	25	23
2965		PARALLEL GR/CARD APPIC/G	109	82
2966		PARALLEL GR/CARD/CABLE APPIC/G02	129	90
2937		PARALLEL I/O CARD & CABLE, APIO	99	90
2936		PARALLEL I/O CARD, APIO	90	82
2939		PARALLEL/SERIAL CARD, AIO I	136	140
2940		PARALLEL/SERIAL CARD, AIO II	225	173
2942		PASCAL DRIVER DISK APIO/ASIO/AIO	20	20
2943		PASCAL DRIVER DISK FOR AIO II	20	20
2938		PASCAL PATCHER DISK AIO	20	20
2935		SERIAL I/O CARD & CABLE, ASIO	149	135
** TYMAC				
3239		PARALLEL CARD & CABLE F/IDS	149	100
3233		PARALLEL CARD & CABLE PPC100	139	78
3234		TACKLER PARALLEL CARD (REQ ROM)	159	98 71
3238		^TACKLER ROM-C ITOH	20	16 14
3235		^TACKLER ROM-EPSON	20	16 14
3237		^TACKLER ROM-NEC	20	16 14
3236		^TACKLER ROM-OKIDATA	20	16 14

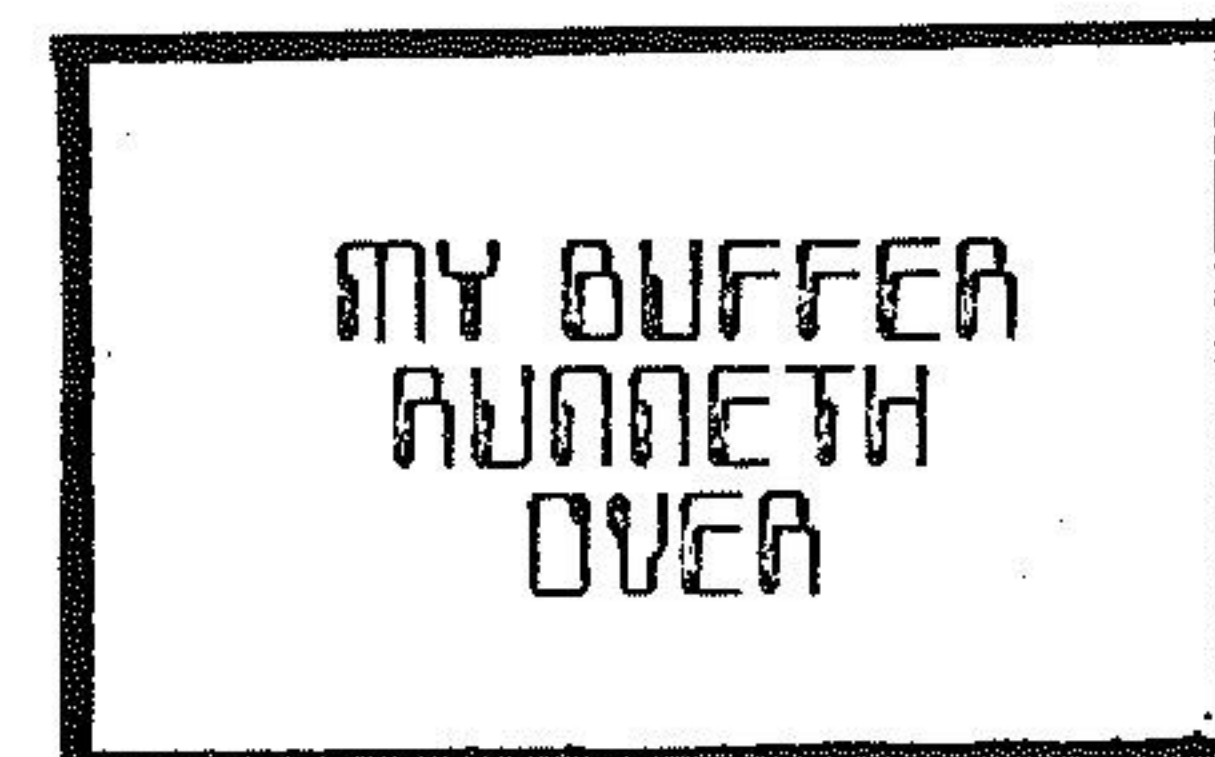
NMBR	N	ITEM	LIST	AAA\$
** HOLLISTER MICROSYSTEMS				
1839		PARALLEL I/O 24 BIT CARD 2400	295	
** INTERACTIVE STRUCTURES				
1895		PKASO AP12 APPLE DMP	175	149
1896		PKASO CE12 CENTRONICS 739/122	175	149
1897		PKASO EP12 EPSON MX70	175	149
1898		PKASO EP12 EPSON MX80/100	175	149
1899		PKASO ID12 IDS 460/560,PRISMS	175	149
1900		PKASO ID12C IDS COLOR PRISM	195	168
1901		PKASO NE12 NEC8023/PROWRITER	175	149
1902		PKASO OK12 OKI 82A/83A	175	149
** INTRA COMPUTER				
1938		AB PRINTER SWITCH-2 PRINTERS	150	135
1939		AB SHARE A PRINTER	150	135
1950		CROSS OVER PRINTER SWITCH	200	179
1953		PROGRAMMABLE SERIAL ID CARD	200	179
1943		SHARE A PRINTER 4 WAY	260	233
** M&R ENTERPRISES				
2046		ADAPTABOX MIC11 RS232C		
** MICROCOMPUTER BUSINESS INDUST				
2105		VIP CARD-PARALLEL/SERIAL GRAPHIC	149	115
** MICROTEK				
2115		DUMPLING 6X PARALLEL CARD/CABLE	159	81
2131		DUMPLING 6X UPGRADEABLE	199	100
2128		INTERFACE CARD RV611	110	54
2116		PARALLEL CARD & CABLE RV611C	140	66
2132		SCAMP RS232	35	26
** MICROMAX SYSTEMS				
2137		GRAPHMAX PARALLEL CARD	150	117
2134		PRINTMAX PARALLEL CARD	90	72
** MPC PERIPHERALS				
2200		CABLE SERIAL DB25/DB25 10'		
2201		CABLE SERIAL DB25/DB25 20'		
2196		CABLE SERIAL TO ANADEx 6'		
2199		CABLE SERIAL TO DIABLO 6'		
2197		CABLE SERIAL TO MANNSMAN TALLY		
2198		CABLE SERIAL TO OKIDATA 6'		
2191		PARALLEL CARD & CABLE AP80	90	67
2192		SERIAL I/O CARD APSID	130	97
** VIDEX				
3282		PARALLEL/SERIAL I/O CARD PSID	229	187



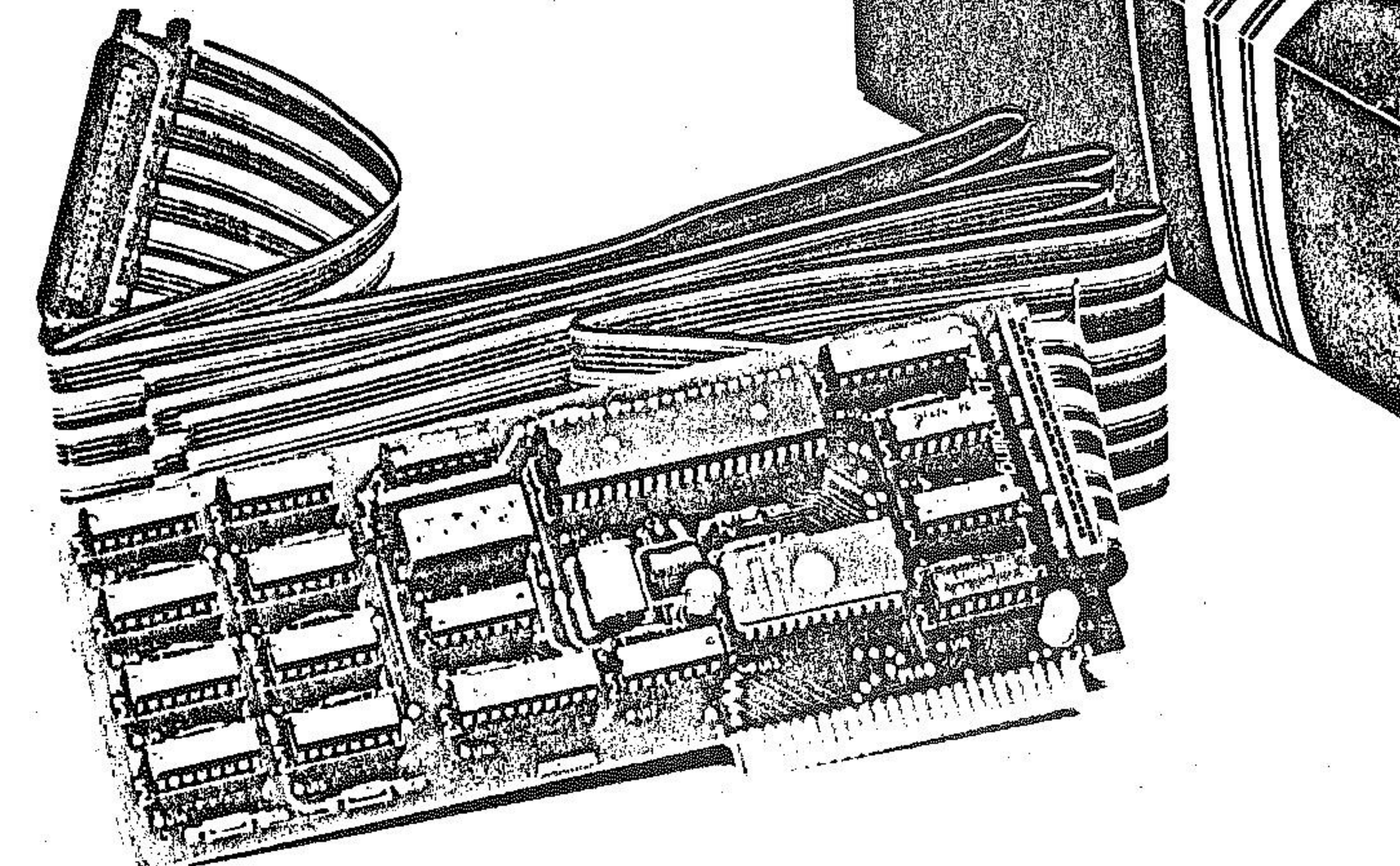
# BUFFERS

NMBR	N ITEM	LIST	AAA\$
** APPARAT			
1138	SPOOL/64 W/PARALLEL INTERFACE	319	280
1139	SPOOLER 6' CABLE STDN PARALLEL	25	27
** CONSOLINK			
1448	MICROSPoolER PAR TO PAR 16K	199	188
1449	MICROSPoolER PAR TO PAR 32K	229	217
1450	MICROSPoolER PAR TO PAR 64K	279	261
1451	MICROSPoolER SER TO PAR 16K	239	226
1452	MICROSPoolER SER TO PAR 32K	269	253
1453	MICROSPoolER SER TO PAR 64K	319	299
1445	SOOPERSPOOLER 16K PARALLEL	349	328
1447	SOOPERSPOOLER MEMORY EXPANSION	159	150
1446	SOOPERSPOOLER SERIAL OPTION	95	92
** INTERACTIVE STRUCTURES			
2190	PIPELINE BUFFER 00BK	230	195
1903	PIPELINE BUFFER 016K	244	219
1904	PIPELINE BUFFER 032K	272	244
1905	PIPELINE BUFFER 064K	328	288
1906	PIPELINE BUFFER 096K	384	336
1907	PIPELINE BUFFER 128K	440	385
1914	PIPELINE BK UPGRADE	14	13
** MICROTEK			
2119	DUMPLING 16-GRAPHICS SPOOLER	249	123
2120	DUMPLING 32-GRAPHICS SPOOLER	299	147
2117	DUMPLING 64-GRAPHICS SPOOLER	399	197
** PRACTICAL PERIPHERALS			
2526	MB II 16K PARALLEL EPSON 7/8/10	199	166
2530	MB II 16K PARALLEL IDS	199	166
2528	MB II 16K PARALLEL NEC/PROWRTR	199	166
2532	MB II 16K PARALLEL OKIDATA	199	166
2538	MB II 16K SERIAL	199	166
2527	MB II 32K PARALLEL EPSON 7/8/10	219	183
2531	MB II 32K PARALLEL IDS	219	183
2529	MB II 32K PARALLEL NEC/PROWRTR	219	183
2533	MB II 32K PARALLEL OKIDATA	219	183
2539	MB II 32K SERIAL	219	183
2536	MB IN-LINE 32K PARALLEL	299	249
2534	MB IN-LINE 32K SERIAL	299	249
2541	MB IN-LINE 64K EXPANSION MODULE	179	149
2537	MB IN-LINE 64K PARALLEL	349	290
2535	MB IN-LINE 64K SERIAL	349	290
2525	MB/E MBP-16K PARAL EPSON 8/10	159	133
2524	MB/E MBS-8K SERIAL EPSON 8/10	159	133
2540	SNAPSHOT-SCREEN DUMP (REQ A MB)	119	82

NMBR	N ITEM	LIST	AAA\$
** QUADRAM			
2605	EFAZER 32K EPSON MX/FX MEP32	199	191
2606	EFAZER 64K EPSON MX/FX MEP64	289	253
2608	INTERFAZER 32K RAM CARD	230	197
2609	INTERFAZER 64K RAM CARD	295	254
2607	INTERFAZER CONTROLLER UNIT	295	254
2610	INTERFAZER PARALLEL I/O CARD	65	58
2611	INTERFAZER SERIAL I/O CARD	65	58
2603	MF POWER SUPPLY 110VAC TO 9VDC	20	19
2604	MF POWER SUPPLY 220VAC TO 9VDC	20	19
2602	MICROFAZER 128K P/P MP128	445	390
2600	MICROFAZER 32K P/P MP32	225	188
2601	MICROFAZER 64K P/P MP64	299	261
** WESPER MICRO SYSTEMS			
3350	BPD 16K BUFFER ANADEX	179	149
3347	BPD 16K BUFFER EPSON	179	149
3349	BPD 16K BUFFER NEC	179	149
3348	BPD 16K BUFFER OKIDATA	179	149
3354	BPD 32K BUFFER ANADEX	219	178
3351	BPD 32K BUFFER EPSON	219	178
3353	BPD 32K BUFFER NEC	219	178
3352	BPD 32K BUFFER OKIDATA	219	178
3361	BPD PERSONALITY ROM-ANADEX	24	20
3358	BPD PERSONALITY ROM-EPSON	24	20
3360	BPD PERSONALITY ROM-NEC	24	20
3359	BPD PERSONALITY ROM-OKIDATA	24	20
3357	BPD/SOB UPGRADE 16 TO 32K	40	32
3355	SOB 16K BUFFER-SERIAL	209	212
3356	SOB 32K BUFFER-SERIAL	249	242
3363	SPOOLER	349	263
3362	SPOOLER P	289	222
3368	WIZARD EBI 16K PLUGIN-EPSON	145	111
3366	WIZARD IPI-ANADEX	88	69
3364	WIZARD IPI-EPSON	88	69
3365	WIZARD IPI-NEC	88	69
3367	WIZARD IPI-OKIDATA	88	69



## Apple® Dumpling™-64 Spooler/Buffer



The Apple Dumpling-64 is the next logical extension to the industry standard Dumpling-GX parallel interface card. An on-board microprocessor and proprietary on-board firmware from Microtek allows the computer to DUMP vast quantities of data into the Dumpling-64 for later printing, thus freeing up the computer for additional tasks. The Dumpling-64 will instantly interface the following printers for text and hi-resolution graphics via an on-board DIP switch.

Epson	C-Itch	NEC
PMC	Okidata	IDS*
Anadex	Centronics	Mannesmann Tally

and all other printers which use the same graphics routines.

For text and block graphics, most parallel printers available today may be configured with the on-board DIP switch for STR-ACK signals.

The Apple Dumpling-64 allows full use of hi-resolution functions:

Rotation, Inversion, Double Size, Emphasized Print, Dual Page Dump, Chart Recorder Mode and control over all variables for text and graphics.

\*with special PROM and cable.

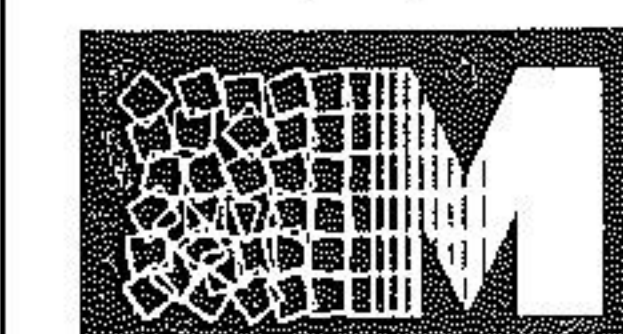
Dumpling-GX is a trademark of Microtek, Inc.  
Dumpling-64 is a trademark of Microtek, Inc.  
Apple is a registered trademark of Apple Computer, Inc.  
CPM is a registered trademark of Digital Research, Inc.

In addition to the standard graphics features, the Apple Dumpling-64 offers:

- Buffer sizes from 0 K to 64K. User upgradable
- Graphics Dumps to Buffer. Page 1 and/or 2.
- Multiple Consecutive Screen Dumps to Buffer.
- Software reset to clear Buffer.
- "Space Compression" saves valuable memory taken up by 'spaces' in text or spread sheets.
- Automatic Buffer Size Recognition.
- Pause while printing-immediate.
- Pause while printing-delayed.
- Resume printing.
- REMOTE pause-immediate: hooks up to telephones, switches — etc.
- Buffer ON/OFF control.
- INSERT text editing capability with Pause and Buffer ON/OFF controls.

Of course, there's PASCAL and CP/M compatibility, Ideal default conditions, and our standard 2 Year Warranty.

The Dumpling-64. Why settle for less.



MICROTEK Inc.

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San Diego, CA 92123  
(619) 569-0900  
Outside CA call  
Toll Free (800) 854-1081  
TWX. 910-335-1269



# PKASO™

## PKASO Printer Interface

The PKASO Printer Interface is an intelligent text and graphics output system for Apple Computer and dot matrix printers.

The PKASO Interface is compatible with most popular languages, such as BASIC, CP/M, and ASSEMBLER, and is designed to print both text and graphics with PASCAL. Full support is also available for Apple III's expanded graphics and changeable character fonts.

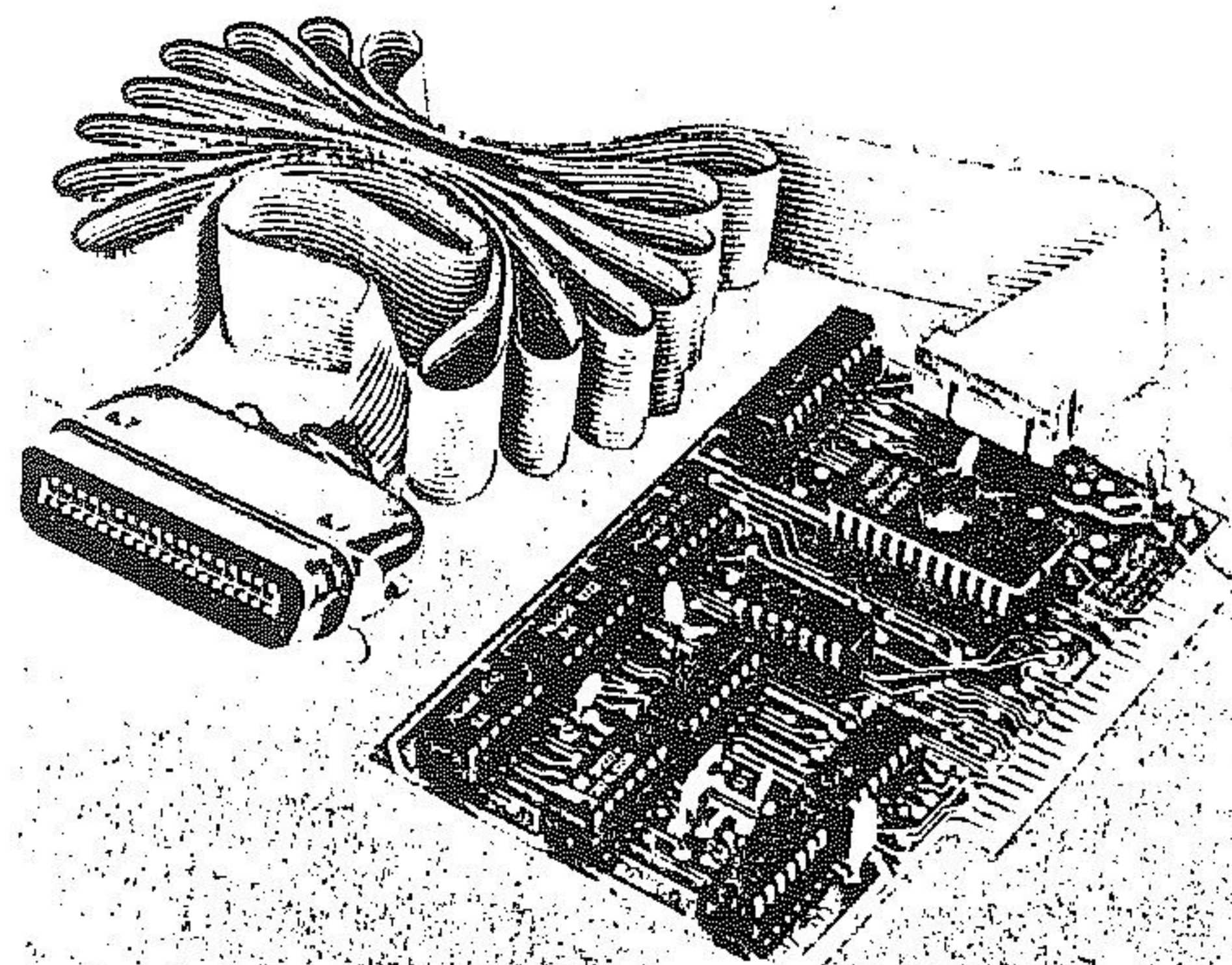
### FEATURES: (Apple II or Apple IIe)

- Full snapshot dump of any screen image
- HiResolution Graphics
- LoResolution Graphics
- Text
- 16 level gray scale printing
- Superfont™ system for design of special characters or symbols.
- Simple standardized commands for character sizes, tabs, etc.
- Full color for the color printers.

### FEATURES: (Apple III)

- All of the above features in "emulation mode".
  - Invokable screen dump supporting all graphics modes.
  - Print using the III's screen character font.
- Apple DMP; Epson MX-70, MX-80, MX100 (Grafrax); NEC PC8023A/C; C. Itoh 8510 Pro/Writer; Integral Data Systems 460, 560, Prisms, Color Prisms; Okidata 82A, 83A (Okigraph I); or Centronics 739, 122 printers.

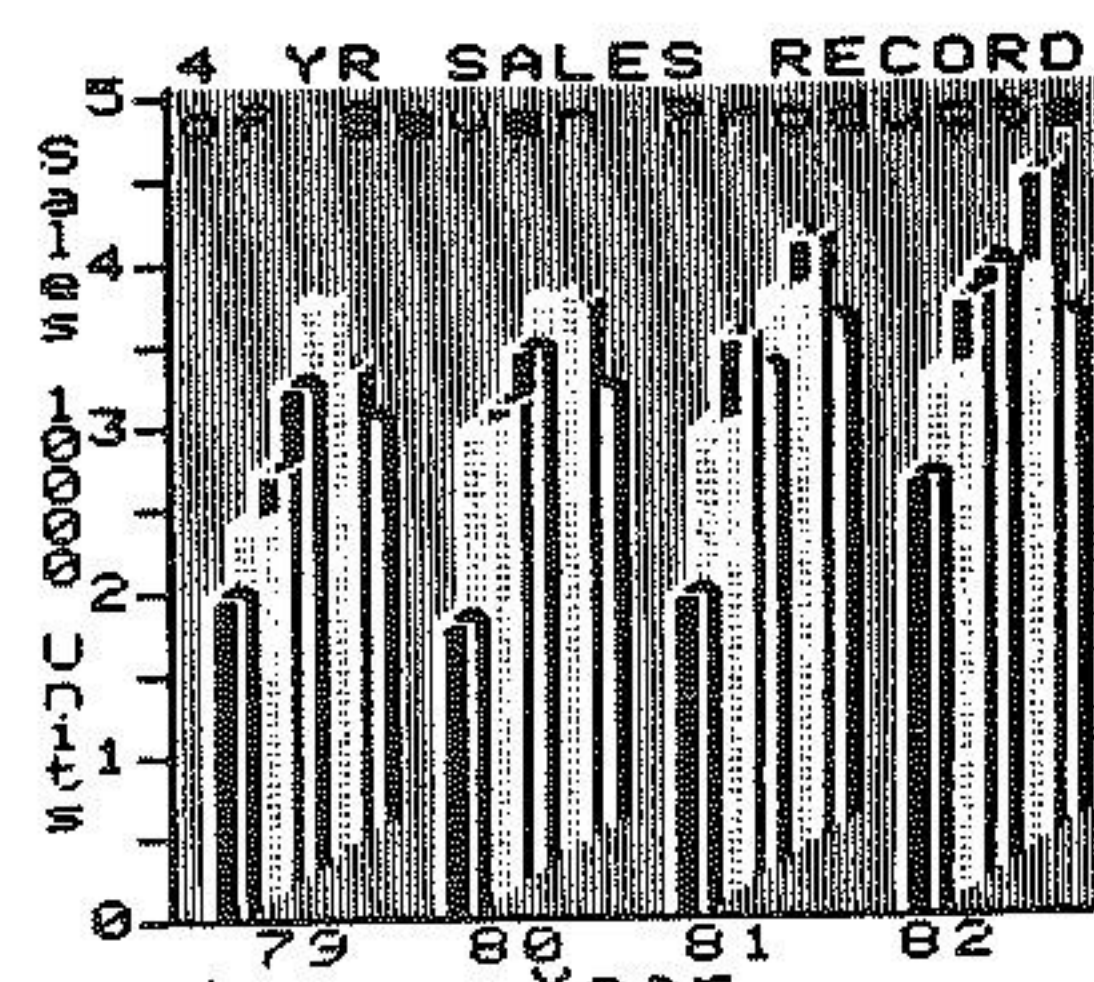
\*Apple is a trademark of Apple Computer, Inc., Cupertino, Ca.



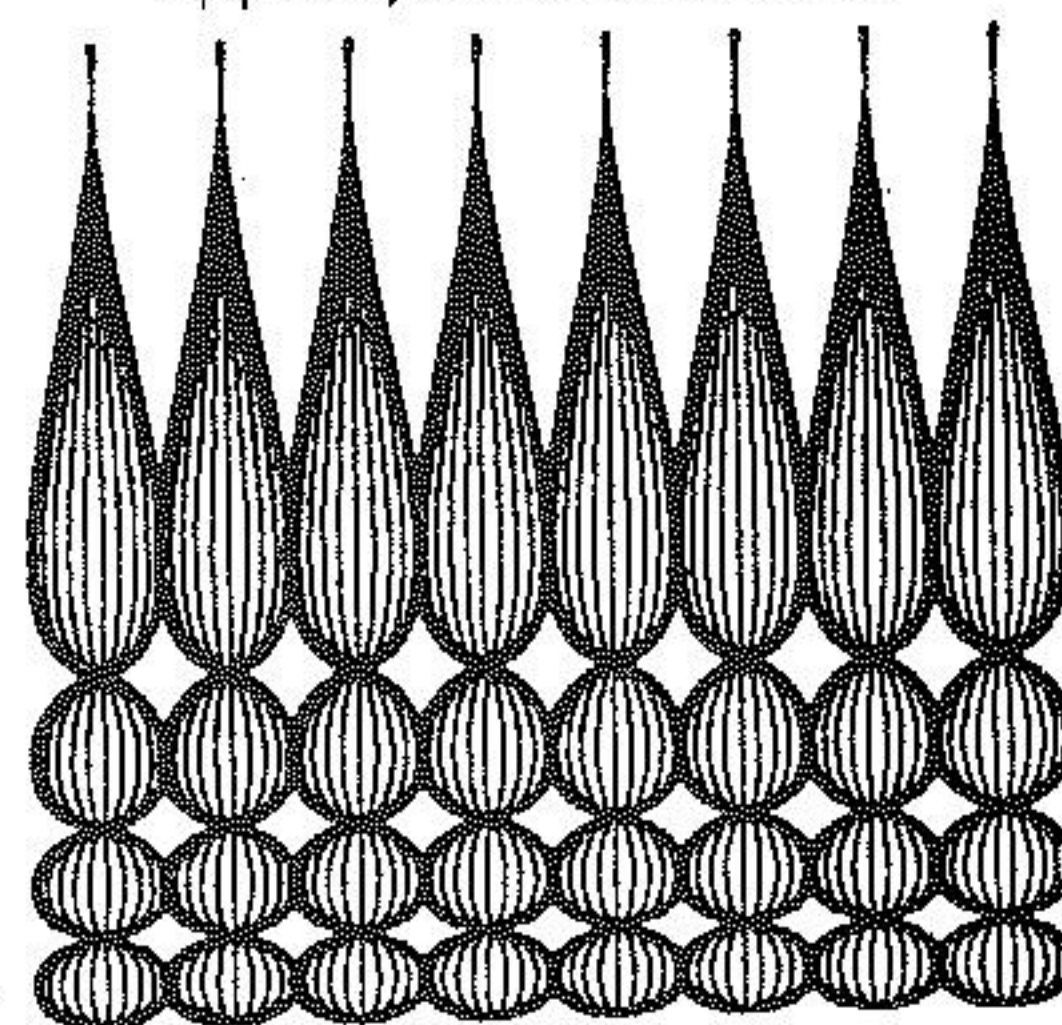
# PKASO™

## Use Your Favorite Software Program With Ease

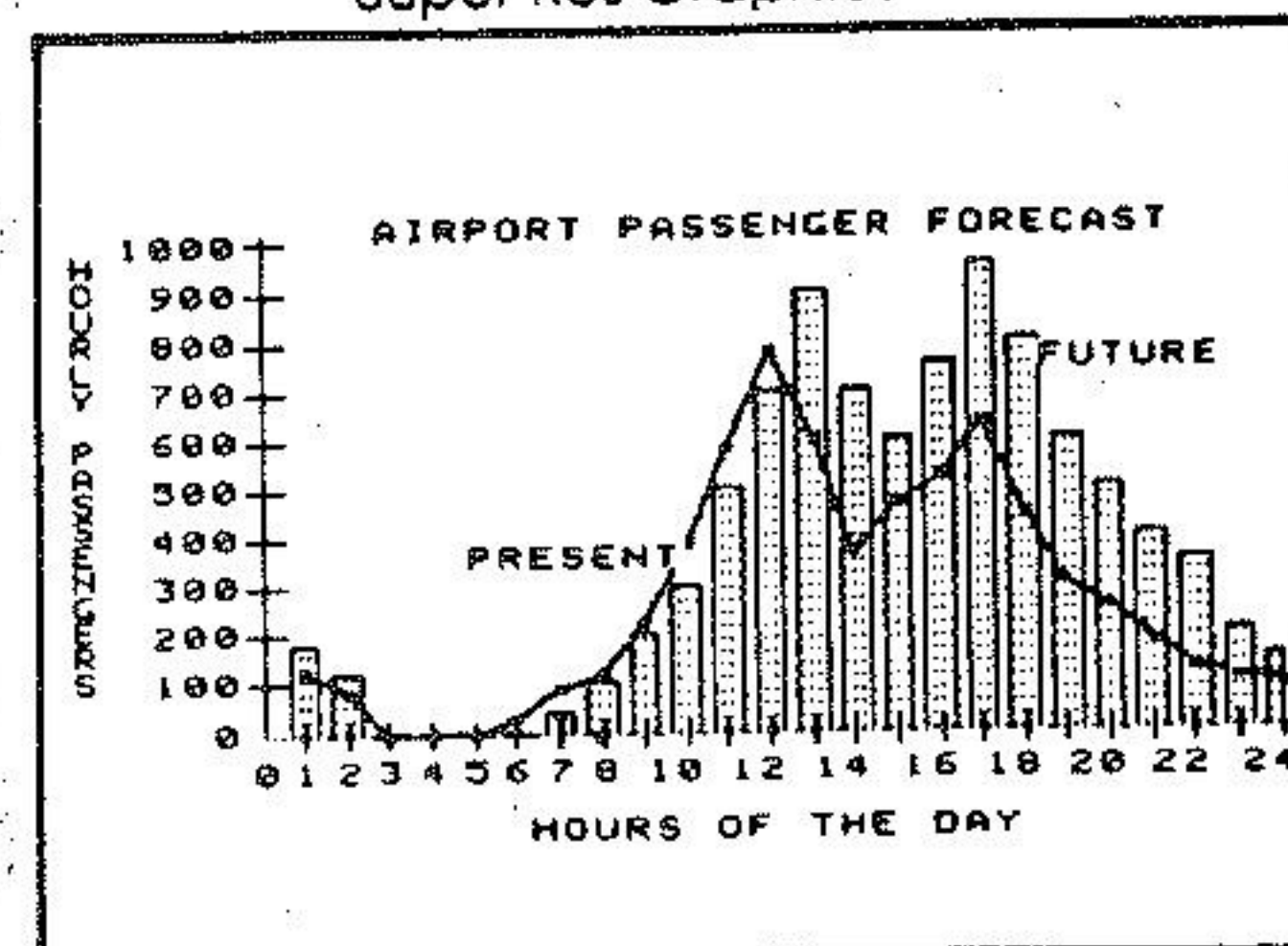
Everything is included in your PKASO interface card to start printing letters using your favorite text processor program, or to start printing Hi Resolution graphics exactly as you see it on the screen. No disk shuffling or program swapping is required to use PKASO features from the keyboard or from a program.



Compatible with all popular Apple Systems & Software



Super Res Graphics

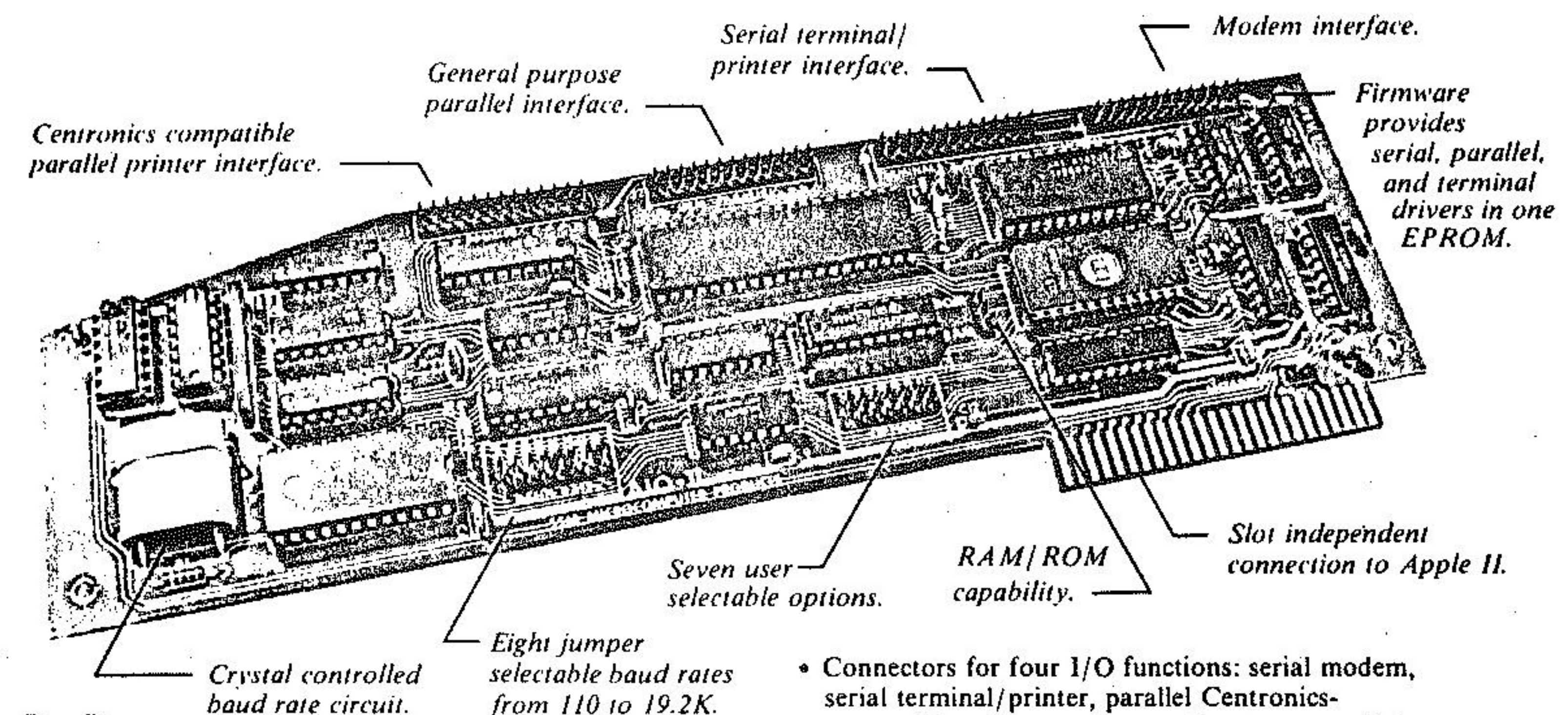


Directing Printing from the video screen

# ESM AIO-II™

## Apple Serial & Parallel Interface

## Four functions to connect the Apple with a wide variety of peripherals.



### Benefits:

- Highly flexible, full function serial and parallel interfaces virtually eliminate the need for any other I/O interface boards.
- Reduce interfacing costs by combining two boards in one.
- Conserves Apple peripheral slots.
- Advanced design techniques assure maximum hardware and software compatibility.
- Can be installed and operated by the novice, yet provides advanced features for the experienced user.
- Optional cable assemblies eliminate the need to hand solder cables.
- Operation is transparent to the user; no software to write.
- Allows simultaneous use of serial & parallel functions.

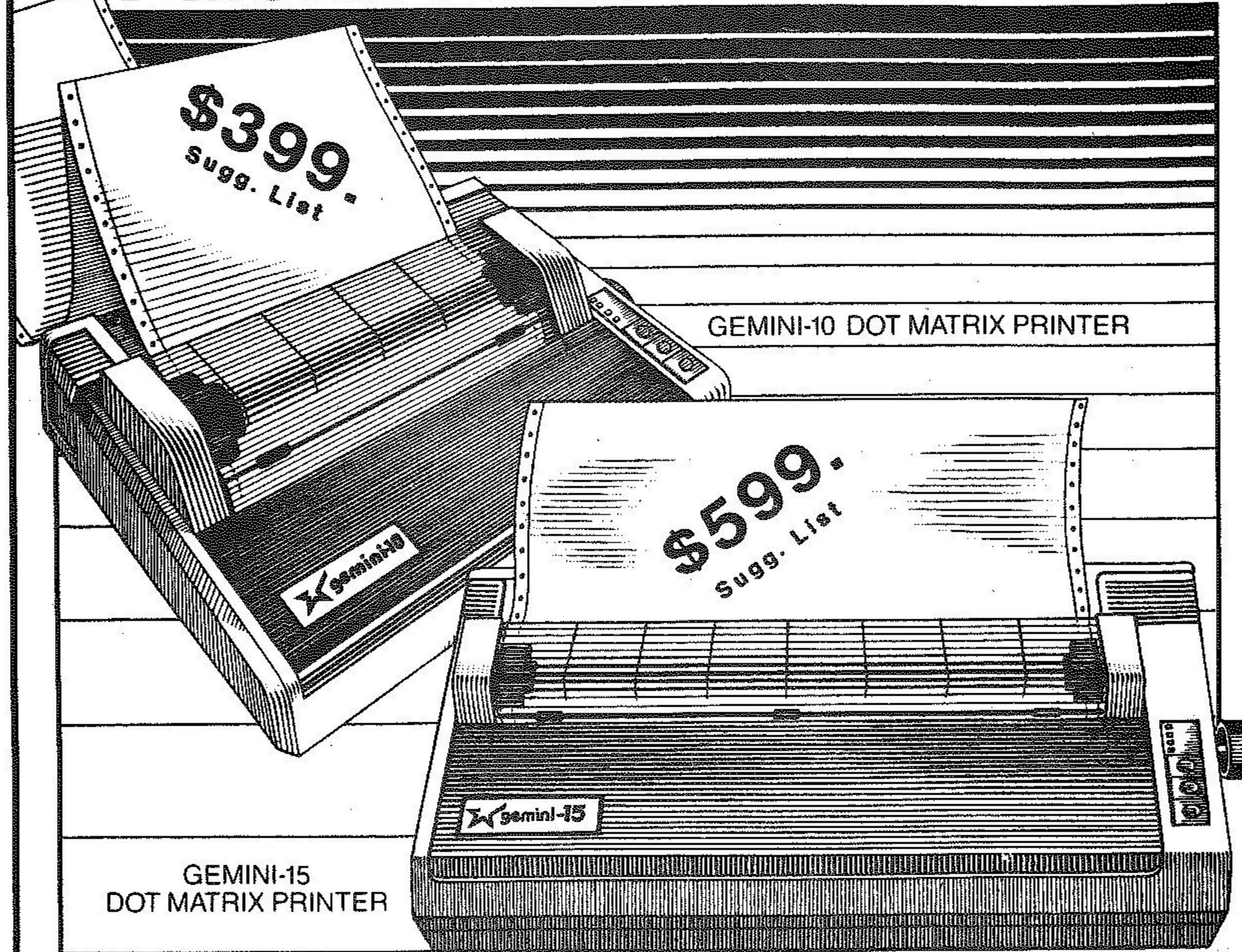
### Features:

- One software-programmable RS-232 serial interface with full handshaking.
- Two full function programmable parallel ports.
- True simultaneous output to serial and parallel devices.

- Connectors for four I/O functions: serial modem, serial terminal/printer, parallel Centronics-compatible printer, and general purpose parallel.
- Eight crystal-controlled baud rates jumper-selectable from 110 to 19200 baud; may be changed at any time through software.
- Supports a variety of printers including Epson, Anadex, Centronics, IDS, Okidata, NEC, Diablo, Qume, TI, MPI, Escon, Data South, Base 2, and more.
- On-board firmware provides all necessary drivers in a single package, including terminal communications.
- Advanced design techniques overcome the need for phantom slot assignments, special set-up requirements, or any Apple II hardware modifications.
- Uses the standard Apple Computer, Inc. software control code protocols.
- 2K static RAM may be substituted for on-board EPROM.
- May be operated in any Apple II expansion slot (except slot 0).
- Optional cables available for most serial and parallel printers.
- Optional drivers available for Apple PASCAL, FORTRAN, and Microsoft Softcard™.



# THE GEMINI-10 AND GEMINI-15 EACH A STELLAR COMBINATION OF MORE FEATURES FOR LESS



**MORE QUALITY:** 100 cps • thrupt time of 48 lpm • high resolution (120x144) bit image & block (6x6) graphics • extra fast forms feed

**MORE FLEXIBILITY:** super/sub script • underlining • backspacing • double strike mode • emphasized print mode • 4k buffer option • compatible with most software supporting leading printers • 10" carriage Gemini-10 or 15" carriage Gemini-15

**MORE RELIABILITY:** 180 day warranty (90 days for head & ribbon) • mtbf rate of more than 5 million lines • print head life of more than 100 million characters

**AND FOR A LIST PRICE LESS THAN THE BEST SELLING COMPETITORS!**

**stair**  
MICRONICS • INC

**THE POWER BEHIND THE PRINTED WORD.**

## THE "ANY COMPUTER" ANY PRINTER" BUFFER

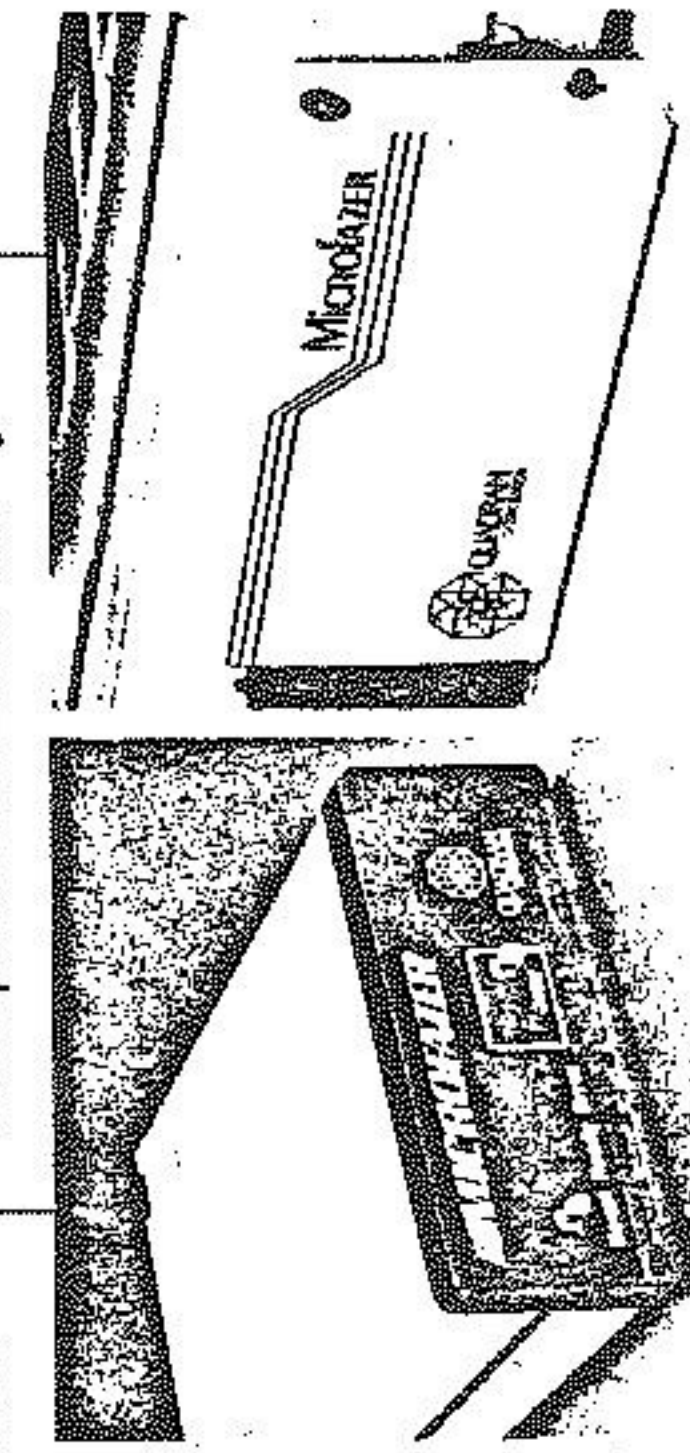


**Time is money.** You have a computer system because you know that it saves you money by simplifying procedures and reducing time normally involved in your work. Time is an important resource which should not be wasted. You are wasting valuable time if you ever wait for your printer.

**No waiting.** Now with Microfazer by Quadram there is no more waiting. Microfazers are inexpensive universal printer buffers which any computer user cannot afford to be without.

Any computer—any printer (or plotter), whether parallel or serial. Microfazer receives information from the computer at ultra high speeds causing the computer to think the printer is printing just as fast as the computer can send. Microfazer holds the information until your printer can handle it, and then sends it on.

**More copies.** Microfazer is equipped with a copy feature allowing additional copies of the buffered information—from one to as many as you want—with the mere press of a button. When you

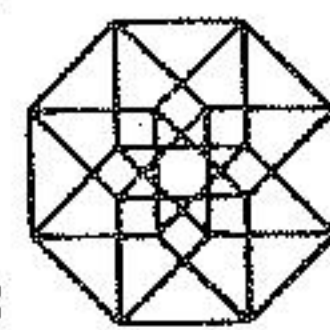


need your information repeated, for whatever reason, it's always right there—inside Microfazer.

Microfazer™ stack. Microfazer can be stacked with popular modems or other peripherals. Some models can plug directly onto the back of your printer. Install it in less than 60 seconds, and choose the amount of buffer

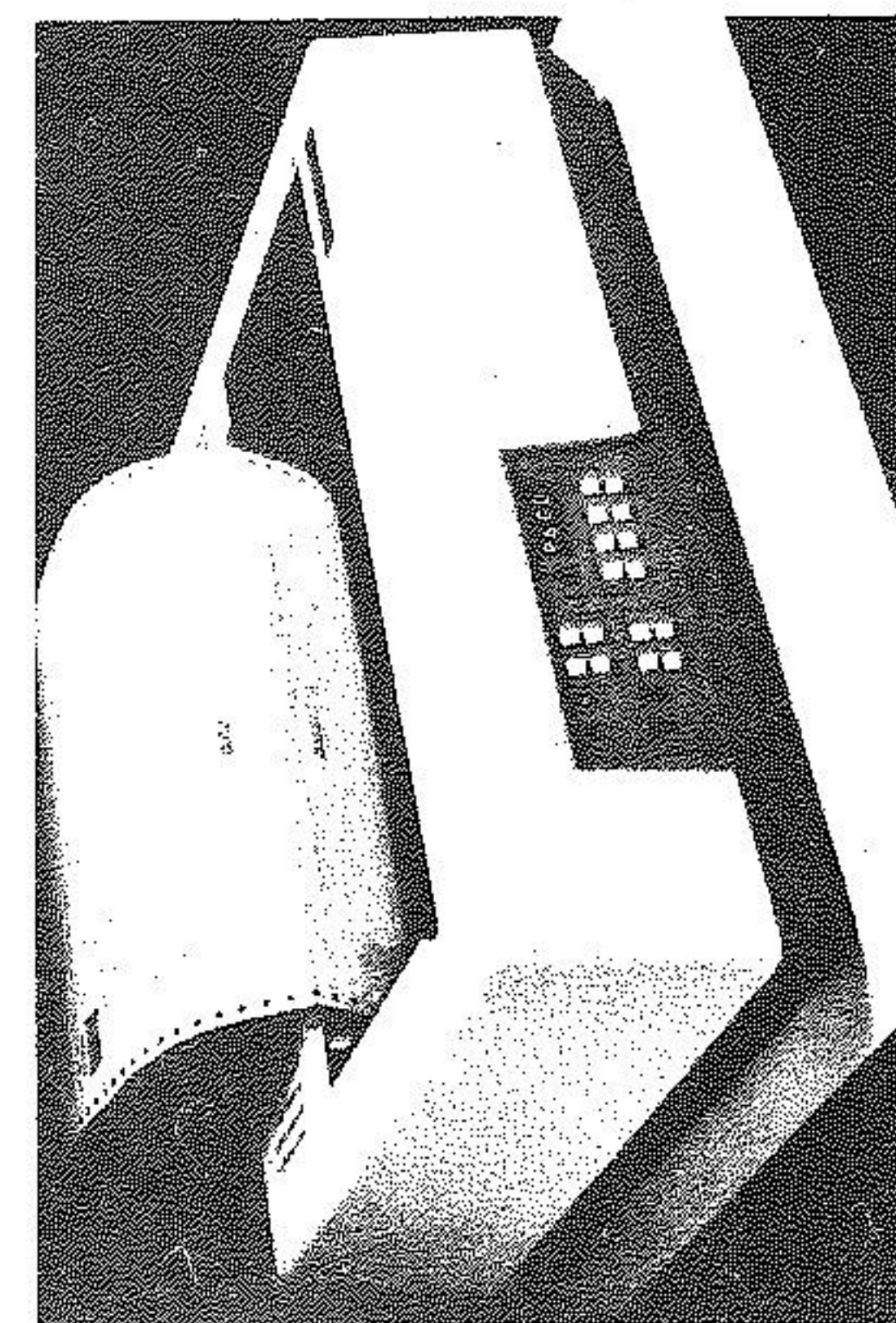
memory you need—8K, 16K, 32K, or 64K. One model even comes with up to 512K! You may use several Microfazers in series to create just what's right for you. Take data in from a serial computer and out to a parallel printer. Or in from a parallel computer and out to a serial printer. Microfazer is just as flexible as you need it to be.

**Low price.** Only \$169 for 8K of buffering, \$189 (16K), \$225 (32K) and \$299 for a full 64K. Serial-to-Parallel, Parallel-to-Serial and Serial-to-Serial models have slightly higher prices.



**QUADRAM**  
CORPORATION  
4357 Park Drive / Norcross, Ga. 30093  
(404) 923-6666

High Resolution -  
A ceremonious  
Vow made on  
New Year's Eve



DS180 matrix printer is an ideal output device for small to mid-range systems because of its high throughput and versatile forms handling capabilities. Innovative product planning and careful attention to detail make the DS180 a high quality machine that is simple in design, yet rugged in construction.

**FEATURES** • 180 cps bidirectional, logic seeking printing • 9x7 dot matrix • 50 programmable features via front panel keypad • Non-volatile format retention • 2K buffer • 6 print sizes • Expanded & compressed characters • 132 column print width • High resolution dot-addressable graphics.

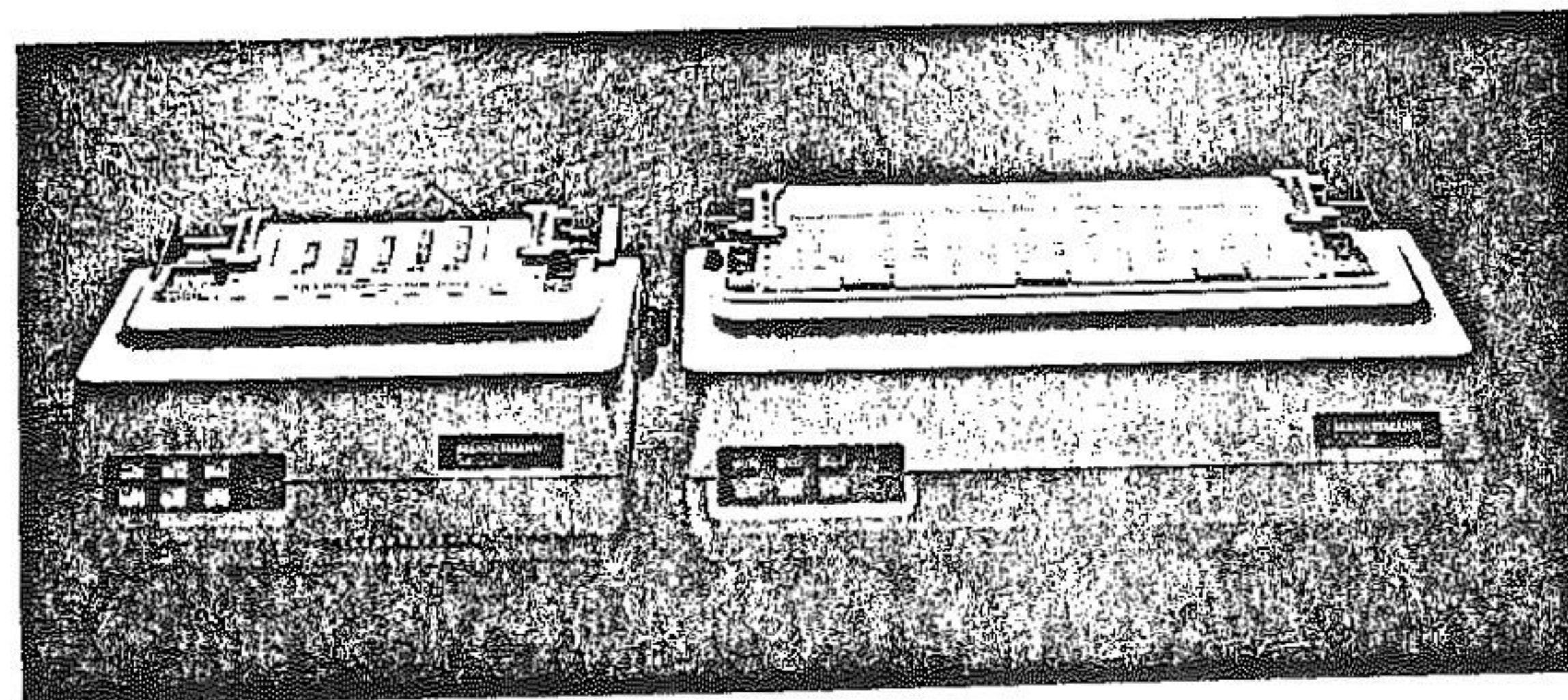
**COMMUNICATIONS** • RS232 serial interface & parallel interface • 110-9600 baud communications • X-on, X-off, DTR Handshaking • Terminal status indicators

**OUR NEW ATTRACTION - THE DS220 MULTI-MODE MATRIX PRINTER** • 220 cps at draft quality printing • 40 cps at correspondence quality printing • Dot addressable, raster scan graphics at 240x144 dpi • 50 programmable features via keypad • User programmable characters • 7 resident character sets

All these features combined create a total printer package capable of handling your every printing need. For more information on Datasouth's products please fill in the reverse side of the card and mail to Datasouth, or call our sales department at (704) 923-8500 P.O. Box 240947, Charlotte, N.C. 28224



For word processing, plotting and just plain printing.



#### MT 160

The perfect mate for your desktop computer.

The space saving, small footprint MT 160 delivers high performance in a tiny package to answer any application you ask of it. You get three machines in one — a word processing printer, a plotter and a high speed report printer. And with condensed printing, you can print 160 columns for spreadsheet applications.

Designed for professionals in business, science and industry, the MT 160 sets the standard for microcomputer printing. Ideal for workstation applications, the MT 160 is the one machine solution for Management Report Generation, Office Correspondence, Decision Support Calculations, Graphics Presentations and Statistical and Analytical Modeling programs.

The rugged and reliable MT 160 delivers continuous duty cycle printing. Unlike other microprinters that slow down when over-worked, the MT 160 is quality constructed to operate non-stop around the clock.

#### The Quality Difference

Tally microprinters deliver 100% duty cycle operation. That means continuous non-stop printing regardless of the work load. Other microprinters fatigue easily and suffer a speed reduction. Not Tally. The MT 160/180 features die cast chassis construction and heavy duty precision machining for optimum print alignment, precise paper handling, noise absorption and heat distribution.

For superior print quality, especially in the letter quality mode, the MT 160/180 features an advanced and unique dual shift print head that transforms its 7 x 9 matrix array into a high density 20 x 18 matrix array for typewriter look-alike text. While other micro printers claim letter quality, they cannot match Tally's high density, dot precision capability for eye-pleasing characters.

**High Throughput**—To get data documented fast, the MT 160/180 has high speed 160 character per second printing, logic seeking bi-directional print head travel and accelerated tabbing. By cutting carriage return time and swiftly seeking the shortest path to the next print position, you realize the throughput rates that far exceed the output of other low cost printers.

#### MT 180

The perfect match for your small business system.

The wide carriage MT 180 is the printer choice for shared work station applications that can use the multi-column capability needed for spreadsheet and accounting tasks. With condensed printing, 264 columns of data can be printed on a standard 15" wide form.

Ideal for multi-task offices, the MT 180 is the answer to application packages that serve General Ledger, Accounts Receivable/Payable, Inventory Control, Invoicing and Financial Planning. For engineering and scientific programs, the printer features 31 resident scientific characters.

The MT 180 is the answer to all your printout needs. You get high resolution business graphics. Outstanding letter quality text for word processing. And continuous high speed report printing for fast throughput.

Whatever your chore or choice of micro-computer, you'll find the MT 180 is the perfect business partner.

## MANNESMANN TALLY

8301 S. 180th St., Kent, WA 98032

**Program by Menu**—For easy and simple machine set up, the MT 160/180 features push button programming. The printer prompts the operator to answer "yes" or "no" to a series of program mode questions such as forms length, line spacing character density, code set, character set and so forth. Printer configuration can also be done via the computer interface.

**Eight Letter Widths**—To give your printout a change of pace, the MT 160/180 has eight different character widths resident in the machine. Condensed printing to save paper. Expanded printing to emphasize a point. A mix of sizes to improve readability. You can select among 20, 16.5, 12 or 10 character per inch spacing; each can be printed double wide for 10, 8.25, 6 or 5 cpi.

**Word Processing Reports Package**—For printed results you thought only a daisywheel could deliver, the MT 160/180 "L" model offers a resident reports package that gives you high density letter quality characters, proportional spacing, right and left hand margin justification and automatic centering of text.

#### RCA REPAIRS PRINTERS

Epson America has contracted with RCA to do all service on the MX Printers. RCA will provide nationwide warranty service for MX series printers and also provide a variety of maintenance service packages at over 400 locations throughout the USA. Watts 800 phone numbers are available depending on the region you live in. Check your phone book yellow pages under Radio Service, or phone information for the nearest RCA Service Company. (Reported by DICK ALBERS WA6RPE of Redwood City, CA).

#### SPEAK UP!

How many times have you read an advertisement for software that promised wonderful things only to find it was less than advertised or its documentation was too complex or worse yet, nonexistent. If you have purchased a program that was easy to follow and did all that the advertising said it would and more, we would like to hear from you. Conversely, if you have bought a lemon, let us know.

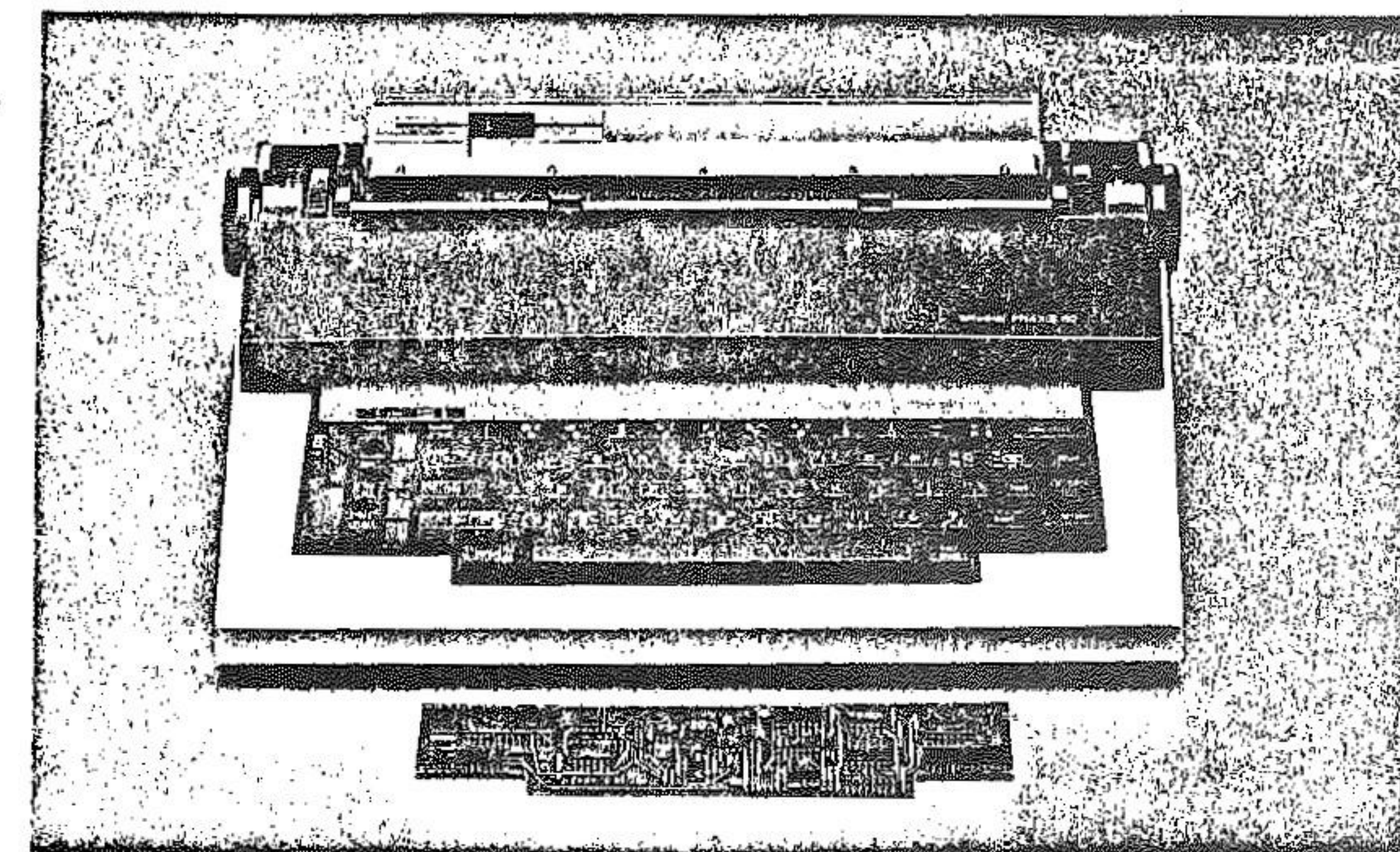
#### BACKUP COPIES OF DISKS

Whether you pay \$1 for several programs or \$100 for one, wisdom demands that you should make a backup copy immediately! Yes, at once. Stifle your eagerness to run your new program(s) and play with the goodies! Only AFTER you have correctly copied your disk and checked that all is well should you run any program on that disk. Label the backup, as well as the original. File the original in a safe place, but not with the backup. Now RUN your programs on your backup copy, serene in the knowledge that when one bomb you have another. In the software line we suggest NIBBLES AWAY by Computer Applications, BACK IT UP by Sensible Software or LOCKSMITH by Omega Microware to make copies of your protected disks. A new approach is to use a Copy Card such as SNAPSHOT by Dark Star, WILDCARD by East Side and CRACKSHOT by Pirates Harbor.

Continued on Page 98.

# Selectone

## The Selectone Micro-Typer™ Letter-Quality Printer



Now you can have letter quality printing at dot matrix prices with the new Selectone Micro-Typer™. The Micro-Typer consists of the popular Olivetti Praxis™ electronic portable typewriter with the addition of Selectone's Micro-Type™ computer interface board. By providing an electronic interface between the typewriter and the computer, the Micro-Type interface creates a versatile, dual-purpose machine: a full feature daisy wheel electronic typewriter and a low cost, portable computer printer ideal for most home computer applications.

#### MICRO-TYPER FEATURES

It's a Typewriter...

- Portable—weighs only 22 lbs including carrying case
- Buffer Memory—for automatic error correction
- Daisy Wheel Design—100 printable characters plus 17 function keys
- Variable Pitch Selection—choice of Pica, Elite, or Mikron spacing (Model OP-35 only)

It's a Printer...

- Compatible—with Wordstar™ and most other word processing software
- Parallel and Serial Versions—for operation with most microcomputers
- Letter Quality—for professional appearing letters and manuscripts



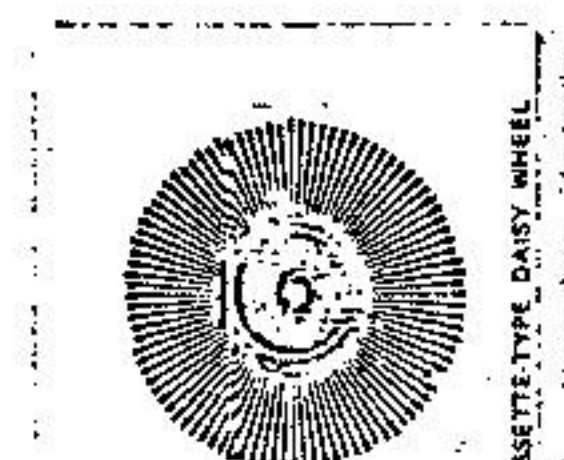


brother.

Division of Special Circuits  
Sales & Marketing Dept.  
Brother International Corp.  
35, S. Avenue, Norwood, NJ 07068  
Tel: (201) 761-1000  
Telex: BROTHER 26142

Dynaflex, a division of KANAMAKI-USA, INC.  
5600 Broadway Blvd. - Ball, CA 94001  
Phone: (415) 260-7121 Telex: 867-7150

Print in color  
& with daisy wheels



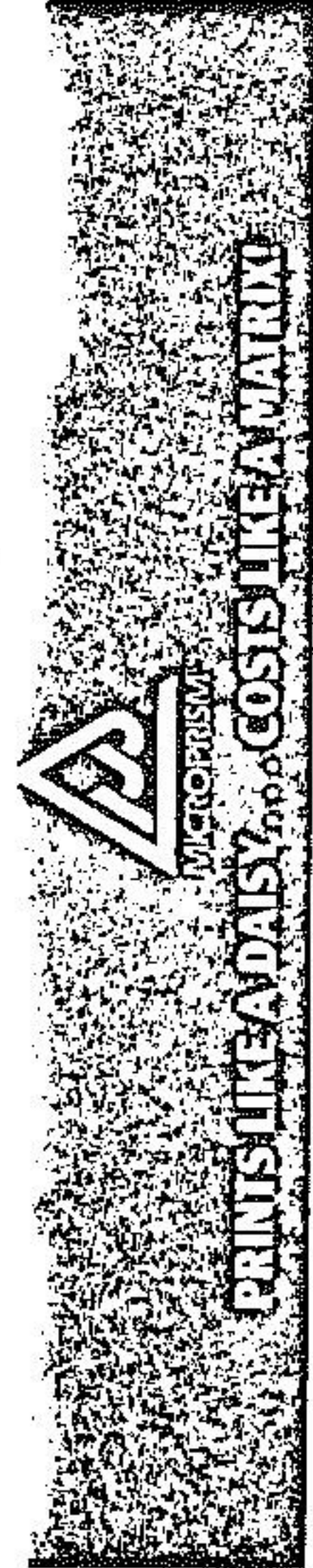
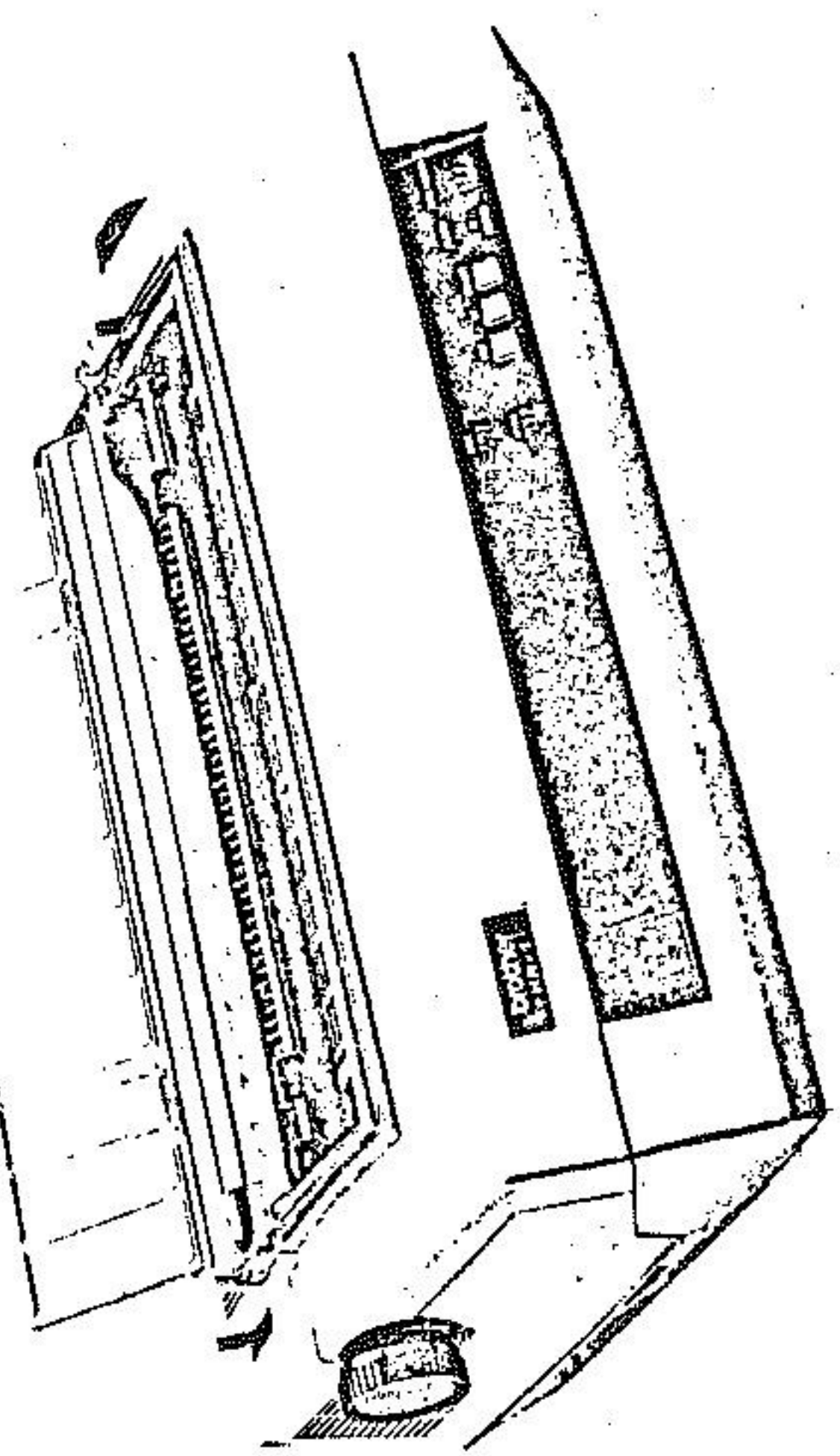
DAISY  
HR-1

Daisy Wheel RO Printer, designed especially for word processing applications, assures high reliability, quiet and high quality printing.

**HIGH QUALITY PRINTING**  
Long-life daisy wheel guarantees high quality printing required for word processing.

**CASSETTE-TYPE DAISY WHEEL AND RIBBON FOR EASY CHANGING**  
One-touch interchangeable and dual-free cassette-type daisy wheel and ribbon assures easy operation never before available.

**HIGH RELIABILITY AND DURABILITY**  
A micro processor to reduce the number of mechanical parts and linear step motor to simplify drive mechanism increases the reliability and durability.

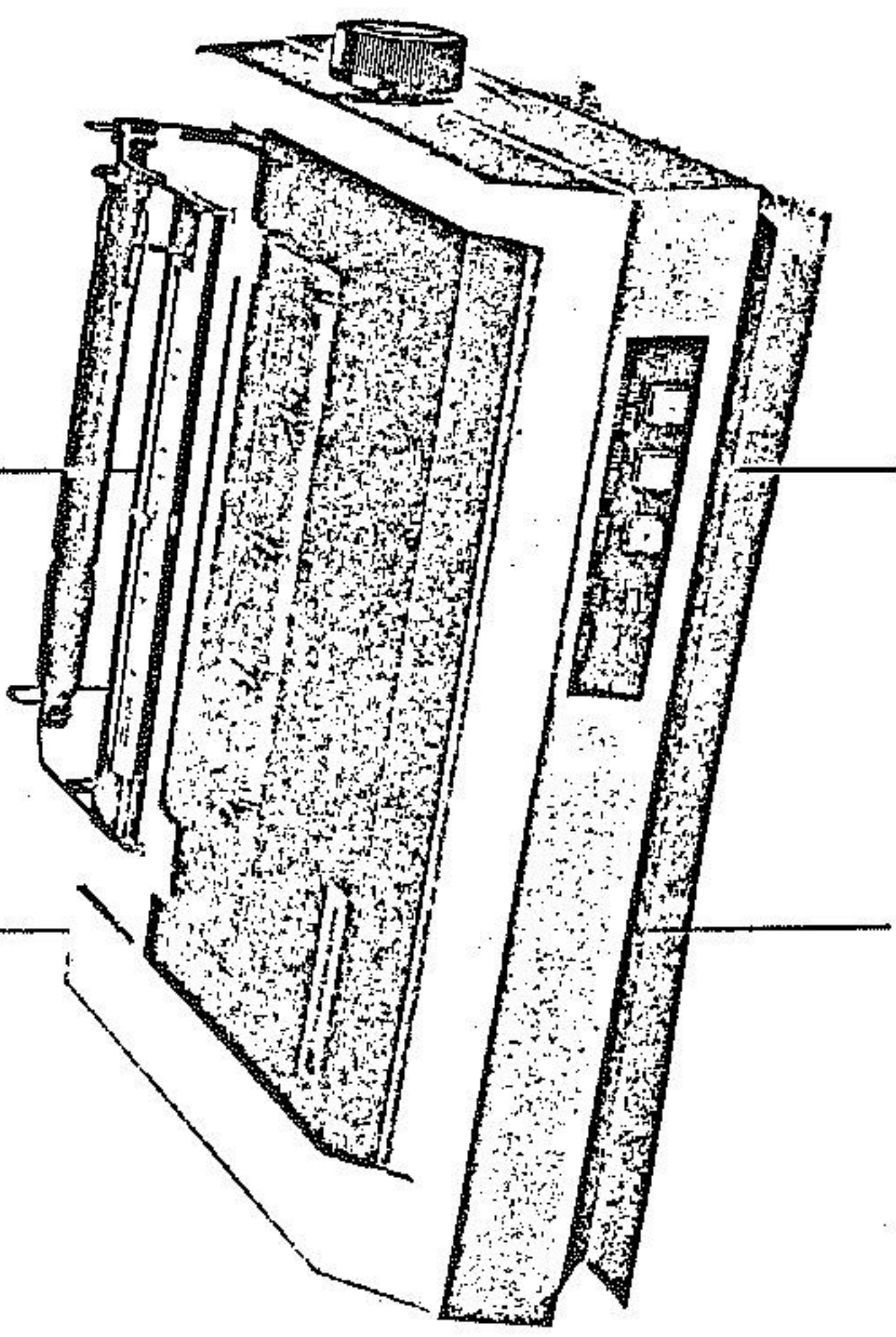


PRINTS LIKE A DAISSY... COSTS LIKE A MARK II

graphics with 84 x 84 dpi. In one pass. All in a 5" x 16" x 12" package. MicroPrism is software compatible with Prism Printer, too. It's ideal for a multiple print station environment. In fact, everything about the MicroPrism fits just right: the size, the price, the print quality, the capabilities... and the company that brings it to you. Integral Data Systems, the innovator in imaging ideas.

But don't let the MicroPrism's size fool you. It's packed with capability you wouldn't expect in such a cost-effective package. MicroPrism also offers dual speed capability, with print speed in correspondence to quality at 75 cps and in high-speed data mode at 110 cps. Proportional spacing, text justification, and something you'll never find on a more expensive daisy wheel: high resolution, dot-addressable, raster

The new MicroPrism Printer offers you many of the features of the Prism Printer in a smaller and lower-cost package. If you don't need the expanded capabilities of the Prism Printer, but quality and reliability are important to you, then the MicroPrism is the perfect answer. The MicroPrism also enables you to produce correspondence-quality text approaching that of more expensive daisy-wheel printers, in a single pass. And because of its compact size, it fits well in any environment.



# MONITORS

NMBR N ITEM LIST AAA\$

## \*\* ADVANCED LOGIC SYSTEMS

1066	DIRT CHEAP TV INTERFACE	89	70
1065	RGB COLOR II INTERFACE	179	137

## \*\* AMDEK

1080	AMBER 12" VIDEO 300A 18MHz	199	162
1082	AMBER 12" VIDEO 310A 18MHz	230	174
1078	B&W 12" VIDEO 100 12MHz	110	91
1098	COLOR 16 INTENSITY MOD RGB	11	11
1083	COLOR I 13" LORES 260X300	379	313
1097	COLOR I+ 13" LORES	379	328
1084	COLOR II 13" HIRES RGB 560X240	529	438
1085	COLOR III 13" MDRES RGB 260X300	479	381
1087	COLOR IV 13" XHRES RGB 720X420	1299	986
1079	GREEN 12" VIDEO 300 18MHz	179	144
1081	GREEN 12" VIDEO 310 18MHz	220	165
1095	AC200 VIDEO 300 CABLE	23	11
1096	AC300 COLOR I CABLE	23	13
1086	DVM RGB CARD	199	131

## \*\* APPLE COMPUTER

1144	GREEN 12" MONITOR ///	269	212
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## \*\* ATI

1245	B&W 9"	150	84
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## \*\* BMC USA

1290	AMBER 12" BM12AY	119	103
1291	AMBER 12" BM12EYN	199	173
1293	COLOR 13" BMAU9191MU RGB	645	574
1292	COLOR 13" BMAU9191U	395	288
1288	GREEN 12" BM12AU 15 MHz	99	90
1289	GREEN 12" BM12EUN 18 MHz	189	159
1299	MONITOR BASE PA900	30	27

## \*\* COMREX INTERNATIONAL

1441	AMBER 09" MONOCHROME	200	167
1444	AMBER 12" MONOCHROME	230	179
1437	COLOR 13" COMPOSITE	449	350
1438	COLOR 13" RGB	559	519
1439	GREEN 09" MONOCHROME	180	154
1436	GREEN 12"	140	109
1442	GREEN 12" MONOCHROME	210	167
1440	YELLOW 09" MONOCHROME	190	160
1443	YELLOW 12" MONOCHROME	220	173

## \*\* ELECTROHOME

1660	COLOR 13" HIRES IBM/RGB 1302-03	499	418
1658	COLOR 13" HIRES RGB 1302-2	489	410
1659	COLOR 13" HIRES RGB/NTSC 1302-2N	519	435
1656	COLOR 13" MDRES RGB 1302-1	269	231
1657	COLOR 13" MDRES RGB/NTSC 1302-1N	299	250
1664	GREEN 09" HIRES 0926-P31	170	146
1665	GREEN 12" HIRES 1226-P31	189	162
1663	ECM COLOR CABLE PP1302	6	6
1666	NTSC 2 COLOR CARD I1302	119	103
1661	NTSC OPTION	100	84
1662	SUPERCOLOR RGB CARD	249	224

NMBR N ITEM LIST AAA\$

## \*\* JVC/DYNAX

1977	AMBER AM-121 12"	229	135
1978	GREEN GM-120 12"	200	115

## \*\* M&R ENTERPRISES

2044	SUP'R MOD UNIVERSAL TV INTERFACE	70	58
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## \*\* MICROTEK

2124	RAINBOW-256 RGB CARD	269	206
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## \*\* NEC HOME ELECTRONICS

2218	COLOR 12" JC1203DH RGB 690X230	798	678
2217	COLOR 12" JC1212M(A) 250X	399	306
2215	GREEN 09" JB902M(A) 20MHz	199	165
2216	GREEN 12" JB1201M(A) 20MHz	210	178
2219	GREEN 12" JB1260M(A) 15MHz	150	115
3512	Amber 12" JB/205M	210	185

## \*\* PANASONIC

2393	COLOR 10" CT160	399	306
2394	GREEN 12" TR120MIP HIRES	220	173

## \*\* RING KING VISIBLES

2711	CRT TRAY 16Wx12Dx2.5H PT1216S	13	9
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## \*\* SANYO

2774	B&W 09" VM4509	190	160
2777	B&W 12" DM2012	145	108
2776	B&W 12" DMB012 HIRES	250	192
2780	COLOR 13" DMC6013 NTSC	470	388
2781	COLOR 13" DMC6113 MDRES	795	691
2782	COLOR 13" DMC7013 LORES & SPKR	495	420
2775	GREEN 09" DM5109CX HIRES	200	154
2778	GREEN 12" DM2112	160	122
3462	GREEN 12" DM5112	360	288
2779	GREEN 12" DMB112 HIRES	260	200
3463	MONITOR 25" AVM 255	795	833

## \*\* TAXAN/TSK ELECTRONICS

3129	AMBER 12" KG12N-UY	179	140
3131	COLOR VISION 1 12" LORES RGB	399	325
3133	COLOR VISION 1 W/RGB 2A CARD !!	528	344
3132	COLOR VISION 3 12" HIRES RGB	699	556
3130	GREEN 12" KG12N	169	127
3134	RGB 2 CARD	139	103
3135	RGB 2A CARD W/TEXT-COLOR CHNG	149	109



# MONITORS

NMBR N ITEM

LIST AAA\$

** USI			
3242	AMBER 09" PI-4 20MHz	199	124
3244	AMBER 12" PI-3 20MHz	249	144
3245	COLOR 14" COMPOSITE 1400C	399	319
3241	GREEN 09" PI-1 20MHz	149	92
3243	GREEN 12" PI-2 20MHz	210	123
3246	^COMPUMOD 4 INTERFACE	60	40
3247	^MULTIDISPLAY INTERFACE	449	344
**VF ASSOCIATES			
3511	TV RF MODULATOR INTERFACE	49	26
** ZENITH			
3396	AMBER 12" ZVM-123	169	145
3392	COLOR 13" GDZ-1320	400	356
3397	COLOR 13" ZVM-131 RGB MDRES	379	332
3394	COLOR 13" ZVM-134 RGB 640X250	699	617
3398	COLOR 13" ZVM-135 RGB 640X480	649	561
3393	GREEN 12" ZVM-121 HIRES	159	115
3395	GREEN 12" ZVM-122	149	128

Continued from Page 94.

## SUPER DISK COPY

We recommend Super Disk Copy by Sensible Software. SDC is a menu driven program that allows manipulation of all types of files under DOS 3.1, 3.2 and 3.3. This program is a must. "The Book" says it's a best buy and we agree! It has the following super features (plus more):

- 1) Copy any single file, Integer, Applesoft, Binary, Text or Relocatable.
- 2) Copy/Erase just DOS.
- 3) Copy an entire disk.
- 4) Brute Force copy for Pascal, FORTRAN and CP/M disks.
- 5) Delete files and UNDELETE previously deleted files.
- 6) INIT target disks with optimized "skew" factors.
- 7) Copy 3.2 to 3.3 and back again.
- 8) Lock and Unlock.
- 9) Alphabetize File Names in the directory.
- 10) Plot of track/sector usage.
- 11) Replace illegal characters in file names.
- 12) Optional copying of files so they occupy contiguous tracks/sectors for improved access time.

Continued on Page 99.

# MONITOR DUST COVERS CLEANING KITS

NMBR N ITEM

LIST AAA\$

** CM&T			
1359	COMPUTER CARE KIT CC10	22	15
** COVER CRAFT			
> CLEAR PLASTIC			
1498	AMDEK COLOR 1	9	9
1499	AMDEK VIDEO 300	9	8
1530	NEC JB1201M 12"	9	8
1531	NECJB1202DH 12" COLOR	9	8
** INNOVATIVE COMPUTER PRODUCTS			
1860	VIDEO DISPLAY CLEANING KIT PD	13	9
** LO TECH			
2036	CRT SPRAY CLEANER-BUG SPRAY	6	5
** SOUTH COAST ENTERPRISES			
> TAN PLASTIC			
2881	AMDEK COLOR	14	12
2880	AMDEK GREEN	13	11
2905	NEC COLOR	12	10
2904	NEC GREEN	12	10
2908	SANYO 12"	12	10
2907	SANYO 9" GREEN	10	9
** TEXWIPE			
3157	CRT CLEANING KIT DTC290	14	12
** WILSON JONES			
3381	ANTI STATIC KIT	11	8
3380	VIDEO DISPLAY CLEANER KIT	20	14

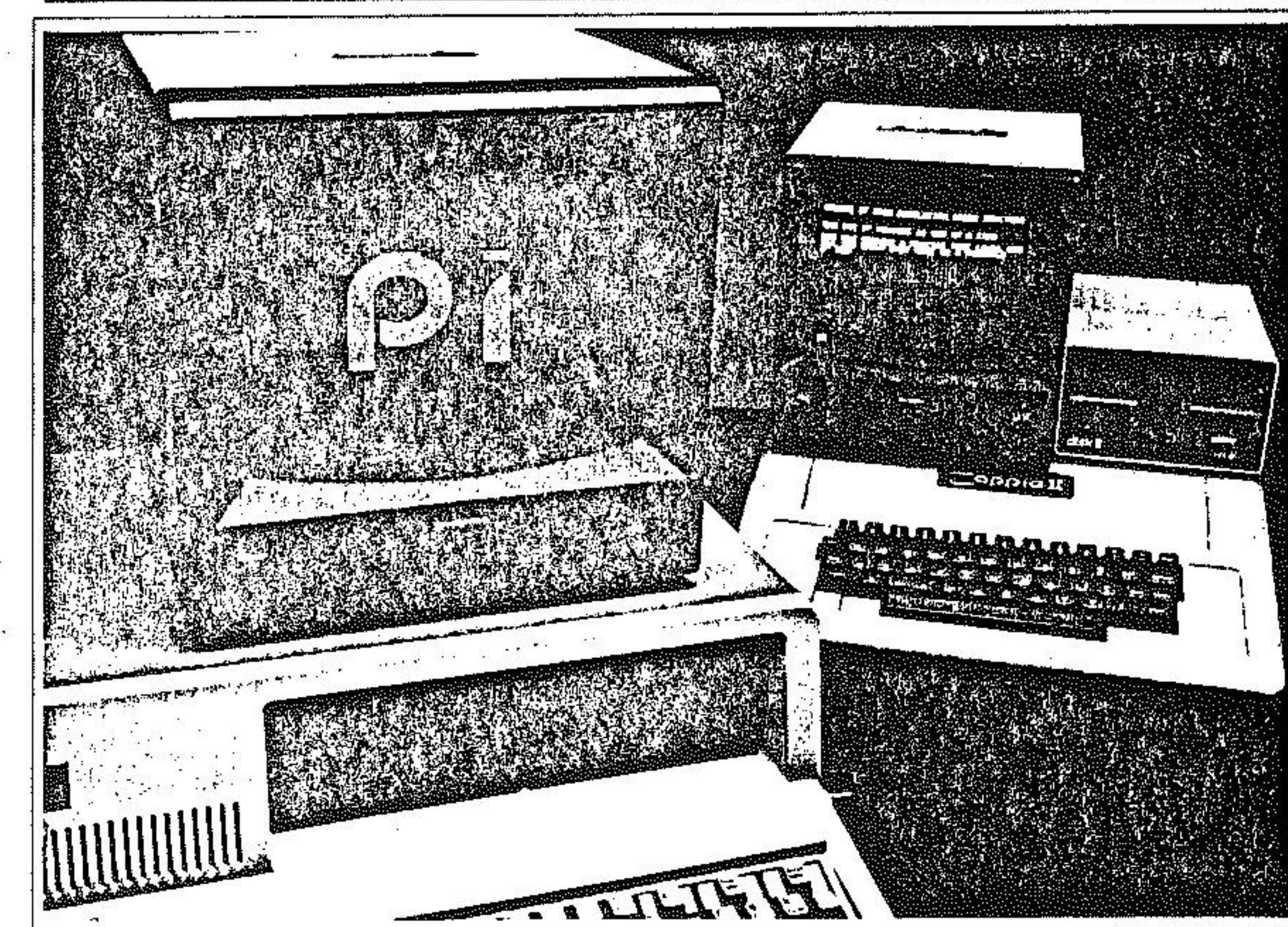
Continued from Page 98.

## 3A PRESS

### PENULTICOPY

Penulticopy, made by ALF Products, is designed to make one or multiple copies of non protected disks, fast and without first INITIALizing each disk. We are using Penulticopy and find it is great. Actual copy time is about 31 seconds, but Penulticopy saves time in several other ways that make it superior. You may copy up to 9 copies in sequence depending upon how many disk drives and controller cards you have (2 drives and 1 or 2 controller cards are the required minimum. Because the drives are turned on, off and on in sequence the load on the Apple power supply isn't excessive. Of course, ALF Products also sells a diamond studded external replacement power supply for only a little less than \$900 (the diamonds are free). Penulticopy seems to have many error trapping and checking routines that help insure faithful copies! Also, it copies Pascal and CP/M. There is a slight catch and that is you must checkout and reset the motor speeds of your disk drives to make them match. Penulticopy includes a motor speed program and simple documentation. Check the software section under ALF for our price. □

**DIODE**  
The way I want  
to die.



## USI... Your Obvious Choice In Monitors

The new USI Pi series of video monitors is a true breakthrough in quality, performance... and value.

### High Resolution

Make a side-by-side comparison with other video monitors. You'll see clean, crisp, quality character generation like you've never seen before.

With this kind of dramatic clarity on individual characters, imagine what it will do for graphics!

**Next-Generation Amber Displays**  
In addition to our easy-on-the-

eyes green displays, USI is the first to offer advanced amber monitors in the U.S.

Major research has shown that amber displays reduce eye strain—even after long periods of use. No other monochrome color even comes close.

**100% Tested, Better Support**  
Every USI monitor gets a 100-hour factory burn-in. Then we re-inspect it before it's shipped.

And, we back-up all of our monitors with a truly exceptional over-the-counter service policy.

The entire Pi series is design-

and plug-compatible with every major small business and personal computer—including Apple, IBM® and Osborne.®

### The Choice is Yours

- Pi-1—Stackable 9-in. green
  - Pi-2—Conventional 12-in. green
  - Pi-3—New 12-in. amber
- Contact us or your local dealer today.

**415 468-4900**

**USI Computer Products**  
71 Park Lane  
Brisbane, CA 94005

### MODEL:

Screen Size (Diagonal):  
Display Area:

Phosphor:

Horizontal resolution at center:

Horizontal band width:

Power requirements +/- 10% @ 60 Hz:

Horizontal rate:

Vertical rate:

Front panel controls:

Input jack:

Dimensions:

Width:  
Height:  
Depth:

Weight:

Warranty: 90 days on all parts and labor.

### Pi-1

9-inch  
80 characters  
24 lines  
P-31 (green)  
1000 lines  
20 MHz  
115 V, 30 watts  
15,600 Hz  
60 Hz

Power switch  
Contrast  
Brightness  
Vertical hold  
Horizontal hold

SO-239  
RCA phono jack

8 3/4"  
8 3/4"  
9 1/2"

14.6 pounds

### Pi-2

12-inch  
80 characters  
24 lines  
P-31 (green)  
1000 lines  
20 MHz  
115 V, 30 watts  
15,600 Hz  
60 Hz

Power switch  
Contrast  
Brightness  
Vertical hold  
Horizontal hold

SO-239  
RCA phono jack

12"  
11 3/4"  
12"

23.3 pounds

### Pi-3

12-inch  
80 characters  
24 lines  
P-27LA (amber)  
1000 lines  
20 MHz  
115 V, 30 watts  
15,600 Hz  
60 Hz

Power switch  
Contrast  
Brightness  
Vertical hold  
Horizontal hold

SO-239  
RCA phono jack

12"  
11 3/4"  
12"

23.3 pounds



## SOFTWARE-APPLE

NMBR P ITEM T LIST SELL

\*\* APPLE SOFTWARE BEGINS  
\*\*\*\*\*  
PARENTHESES MEANS  
THE ENCLOSED ITEM IS REQUIRED!

## \*\* AARDVARK SOFTWARE

5000 INDIVIDUAL TAX PLAN B 300 231

## \*\* ABT MICROCOMPUTER SOFTWARE

5001 DATA-TRANS (MMII/SM300/1200) 0 100

## \*\* ACCENT SOFTWARE

5002 ACCU SHAPES B 50 37  
5005 LOOP HOLE G 25 20  
5006 SOFT STEP & ACCU SHAPES \*DEMO G 8  
5003 SOFT STEP-DEBUG APPLESOFT U 50 37  
5004 TGS:THE GRAPHIC SOLUTION G 150 106  
5007 TGS:THE GRAPHIC SOLUTION \*DEMO G 9

## \*\* ACE COMPUTER PRODUCTS

5009 ACEMAIL 1200 (SM1200) 0 139  
5008 ACEMAIL 300 (SM300) 0 100

## \*\* ACTION RESEARCH NORTHWEST

5014 AIDA AUTO INTERACTION DETECTION B 100 78  
5013 AIDA ENCORE B 50 40  
5012 AIDA STATISTICAL ANALYSIS B 235 212  
5010 ZARDAX WORD PROCESSOR B 295 224  
5011 ZIP-COMM-UTILITY FOR ZARDAX B 80 66

## \*\* ADVANCED BUSINESS TECHNOLOGY

5015 PASCAL TOOLS I U 75 67  
5016 PASCAL TOOLS II U 75 67  
5017 RETAIL MANAGER B 2200 1702

## \*\* ADVANCED DATA INTERNATIONAL

5018 ADVANCED POINT OF SALE B  
5019 CHECK BOOK RECORDING B 195 128  
5020 MEDICAL ACCOUNTING SYSTEM B 1495 915

## \*\* ADVANCED SOFTWARE TECHNOLOGY

5021 QUICK & EASY DATA MASTER B 70 59

## \*\* ADVENTURE INTERNATIONAL

5040 APPLE SPICE U 30 24  
5041 COMMBAT (REQ 2 APPLES/MODEMS) R 25 20  
5023 CURSE OF CROWLEY MANOR R 30 22  
5024 ELIMINATOR R 30 22  
5044 INTERACTIVE FICTION R 30 24  
5042 LABYRINTH OF CRETE R 30 24  
5046 MISSILE ATTACK R 30 24  
5045 MISSION IMPOSSIBLE R 40 32  
5047 MORTONS FORK R 30 24  
5048 OTHER VENTURES I R 16 16  
5022 REAR GUARD R 30 22  
5025 SAGA 01 ADVENTURELAND R 40 29  
5026 SAGA 02 PIRATES ADVENTURE R 40 29  
5027 SAGA 03 MISSION IMPOSSIBLE R 40 29  
5028 SAGA 04 VODDOD CASTLE R 40 32  
5029 SAGA 05 THE COUNT R 40 32  
5030 SAGA 06 STRANGE ODYSSEY R 40 32  
5031 SAGA 07 MYSTERY FUN HOUSE R 40 32  
5032 SAGA 08 PYRAMID OF DOOM R 40 32  
5033 SAGA 09 GHOST TOWN R 40 32  
5034 SAGA 10 SAVAGE ISLAND I R 40 32  
5035 SAGA 11 SAVAGE ISLAND II R 40 32  
5036 SAGA 12 GOLDEN VOYAGE R 40 32  
5037 SEA DRAGON R 35 24  
5043 STONE OF SISYPHUS R 30 24  
5038 TUNNEL TERROR R 30 22  
5039 WAR R 25 19

NMBR P ITEM T LIST SELL

## \*\* ADVISION

5049 SANDY WORD PROCESSOR B 345 259

## \*\* AGS SOFTWARE

5052 AGS MACHINE LANGUAGE SORT-CP/M U 50  
5050 ASTRO-SCOPE R 30 24  
5051 SEX-O-SCOPE R 30 24

## \*\* ALF PRODUCTS

5058 ALBUM 0/MC16 - ALBUM A/MC1 0 15 13  
5059 ALBUM 1/MC16 - ALBUM B/MC1 0 15 13  
5067 ALBUM 10/MC16 - ALBUM K/MC1 0 15 13  
5060 ALBUM 2/MC16 - ALBUM C/MC1 0 15 13  
5061 ALBUM 3/MC16 - ALBUM D/MC1 0 15 13  
5062 ALBUM 4/MC16 - ALBUM E/MC1 0 15 13  
5063 ALBUM 5/MC16 - ALBUM F/MC1 0 15 13  
5064 ALBUM 6/MC16 - ALBUM G/MC1 0 15 13  
5065 ALBUM 8/MC16 - ALBUM I/MC1 0 25 24  
5066 ALBUM 9/MC16 - ALBUM J/MC1 0 15 13  
5056 EAR TRAINING (APPLESOFT) 0 50 47  
5055 EAR TRAINING (INTEGER) 0 50 47  
5054 GENERIC XMAS ALBUM 0 10 9  
5053 PENULTICOPY U 35 33  
5057 PROCESS SERIES 0 50 47

## \*\* ALIEN GROUP, THE

5068 VOICE BOX W/FIRMWARE 0 215 137

## \*\* ALPHA SOFTWARE

5070 APPLE-IBM CONNECTION U 195 138  
5069 TYPEFACES G 125 88

## \*\* APPARAT

5071 EXTENDER-APPLESOFT U 25 24  
5073 FOOTBALL PREDICTION R 35 33  
5072 GENERAL LEDGER B 80 74

## \*\* APPLE COMPUTER SOFTWARE

5074 APPLE DOS TOOL KIT 0 66  
5076 APPLE FORTH+ -FIG FORTH U 87  
5075 APPLE FORTRAN U 200 179  
5077 APPLE LOGO U 162  
5078 APPLE PASCAL W/O 16K CARD U 250 224  
5079 APPLE PILOT U 150 135  
5080 APPLE WRITER II B 128

## \*\* APPLIED SOFTWARE TECHNOLOGY

5081 PASCAL PROGRAMMER U 245 173  
5084 Q-BASE B 189 133  
5082 VERSAFORM (64K) (80 COL RCM) B 389 267  
5083 VERSAFORM-HARD DISK VERSION B 495 361

## \*\* ARROW MICRO SOFTWARE

5085 DOS FILE EXCHANGE 1.0 (MMII) 0 45  
5086 PASCAL FILE EXCHANGE (MMII) 0 45  
5087 REFLEXIVE VC (MMII & VISICALC) 0 45

## \*\* ARTIFICIAL INTELLIGENCE

5088 ELIZA-OBJECT CODE R 25 20  
5090 ELIZA-OBJECT CODE (CP/M) R 25 20  
5089 ELIZA-OBJECT+SOURCE CODE R 45 36  
5091 ELIZA-OBJECT+SOURCE CODE (CP/M) R 45 36

SEE ADVANCED LOGIC SYSTEMS ON P 103

100

## SOFTWARE-APPLE

NMBR P ITEM T LIST SELL

## \*\* ART-SCI/SOFTAPE

5103 APPLE '21' R 25 20  
5124 APPLE LIS'NER 0 30 20  
5108 APPLE TALKER 0 30 20  
5107 BAKERS TRILOGY R 25 20  
5115 BEST OF BISHOP U 40 32  
5125 BRIGHT PEN DISK G 55 53  
5120 CASINO GAMING ASSORTMENT R 70 55  
5104 CRAPS R 25 20  
5113 CROSSWORDS R 25 20  
5100 DIABLO RAM DRIVER U 20 16  
5109 DISK UTILITIES U 30 24  
5118 DRAW POKER R 25 20  
5102 EPSON RAM DRIVER U 20 16  
5110 FORTE R 30 24  
5116 FORTH II U 70 55  
5105 GOMOKU R 20 16  
5114 JOURNEY R 30 24  
5097 MAGIC CALC B 150 106  
5093 MAGIC MAILER B 70 51  
5099 MAGIC MEMORY B 100 72  
5098 MAGIC PAK 80 B 272 205  
5126 MAGIC PAK I B 225 159  
5121 MAGIC SPELL B  
5092 MAGIC WINDOW B 100 72  
5096 MAGIC WINDOW II-40/70/80 COL B 149 111  
5095 MAGIC WINDOW/MAILER/WORDS B 225 159  
5094 MAGIC WORDS B 70 51  
5122 MICROGAMMON II R 20 16  
5112 PENSOFT G 30 24  
5119 PHOTAR R 30 24  
5123 REVERSI R 25 20  
5106 ROULETTE R 25 20  
5111 SCREEN MACHINE G 30 24  
5101 SPINWRITER RAM DRIVER U 20 16  
5117 STARNINES R 20 16

## \*\* ASHTON-TATE

5127 BOTTOM LINE STRATEGIST B 400 300  
5772 DBASE II (5" CP/M 8 BIT) B 700 469  
5128 DBASE II (CP/M 64K) (80 COL RCM) B 700 469  
5129 FINANCIAL PLANNER B 700 519  
5130 FRIDAY B 295 150

## \*\* ASPEN SOFTWARE

5133 GRAMMATIK & PROOFREADER (CP/M) B 125 97  
5131 GRAMMATIK (CP/M) B 50 40  
5132 RANDOM HOUSE PROOFREADER (CP/M) B 75 59

## \*\* AVALON HILL ★

5135 ANDROMEDA CONQUEST R 23 19  
5154 B-1 NUCLEAR BOMBER R 21  
5136 CLOSE ASSAULT R 35 28  
5137 COMPUTER ACQUIRE R 25 20  
5161 COMPUTER FACTS IN FIVE R 26  
5158 COMPUTER STATIS PRO BASEBALL R 35  
5138 COMPUTER STOCKS & BONDS R 25 20  
5151 CONFLICT 2500 R 21 17  
5160 CONTROLLER R 30  
5139 DNIPIER RIVER LINE R 30 24  
5140 DRAW POKER R 21 17  
5141 EMPIRE OF THE OVERMIND R 35 26  
5143 G.F.S. SORCERESS R 35 28  
5142 GALAXY R 25 20  
5144 GUNS OF FORT DEFIANCE R 25 20  
5152 LORDS OF KARMA R 25 20  
5155 MIDWAY CAMPAIGN R 21  
5156 NORTH ATLANTIC CONVOY RAIDER R 21  
5153 PLANET MINERS R 21 17  
5159 S.C.I.M. M.A.R.S. R 26  
5145 SHOOTOUT AT THE OK GALAXY R 25 20  
5146 SPACE STATION ZULU R 25 20  
5157 T.A.C. R 40  
5147 TANKTICS R 29 24  
5148 TELEGARD R 28 23  
5134 THE ALIEN R 28 23  
5149 VC-SHORT FOR VIETCONG R 25 20  
5150 VOYAGER R 25 20

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## \*\* AVANT-GARDE CREATIONS

5190 ACTION SOUNDS & HIRES SCRL R 29 14  
5162 AIR TRAFFIC CONTROLLER R 16 13  
5171 CREATIVE TOOL BOOK, THE G 45 33  
5163 DEATH RACE B2 R 30 22  
5164 DEEP SEA TREASURE R 13 10  
5174 EPSON HIRES DUMP G 25 19  
5165 FEDERATION R 30 22  
5175 GRAPHICS APPLICATION SYSTEM G 75 54  
5187 HIRES ARCHITECTURAL DESIGN B 30 24  
5189 HIRES COMPUTER GOLF R 30 22  
5166 HIRES COMPUTER GOLF 2 R 35 26  
5188 HIRES ELECTRONIC DESIGN B 30 24  
5167 HIRES SECRETS G 125 89  
5176 INTRODUCTORY ALGEBRA E 30 22  
5173 JUMP JET R 30 22  
5168 LAZER MAZE R 30 22  
5177 LOGIC & EUCLIDEAN GEOMETRY E 30 22  
5178 MAIL LABEL & FILING SYSTEM B 75 54  
5169 RACE FOR MIDNIGHT R 30 22  
5179 SENTENCE DIAGRAMMING E 25 19  
5180 SOUND & HIRES SCROLLING G 19 14  
5170 SUPER SHAPE DRAWING & ANIMATION G 35 26  
5191 TRIPLE ARCADE INSANITY R 30 22  
5182 ULTRA FUNCTION PLOT G 60 44  
5183 ULTRA PLOT G 70 51  
5186 ULTRA PLOT/DIF/DATA GRAPH G 99 78  
5184 WORD SCRAMBLER & SUPER SPELLER E 20 15  
5172 ZERO GRAVITY PINBALL R 30 22  
5185 ZES-AUTHORING SYSTEM B 250 176  
5181 ZES-THE HEART B 30 22

## \*\* BARRINGTON EDUCATIONAL

5192 INTEGER FIX DOS 3.3 U 20

## \*\* BEAGLE BROTHERS

5193 ALPHA PLOT B 40 29  
5194 APPLE MECHANIC U 30 22  
5195 BEAGLE BAG R 30 22  
5196 DDS BOSS U 24 18  
5203 DOUBLE TAKE R 35 26  
5197 FLEX TEXT B 30 22  
5198 FRAME UP G 30 22  
5202 PRONTO DOS U 30 22  
5199 TIP DISK I U 20 15  
5200 TYPEFACES (REQ APPLE MECHANIC) U 20 15  
5201 UTILITY CITY U 30 22

## \*\* BEAMAN PORTER

5204 POWERTEXT B 299 229  
5205 POWERTEXT (REQ LC & SHIFT MOD) B 330 254  
5206 POWERTEXT (REQ PASCAL) B 199 153

## \*\* BEZ SOFTWARE

5208 BEZ-MAN R 23 19  
5209 BEZ-OFF R 33 27  
5207 BEZ-WARS R 27 22

## \*\* BIBLE RESEARCH SYSTEMS

5210 THE WORD PROCESSOR E 200 154  
5211 THE WORD-BOOK OF JOHN \*DEMO E 10 7

## \*\* BLUE CHIP SOFTWARE

5212 MILLIONAIRE R 60 48

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** BPI SYSTEMS			
5215	BPI ACCOUNTS PAYABLE	B	395 249
5214	BPI ACCOUNTS RECEIVABLE	B	395 294
5213	BPI GENERAL LEDGER	B	395 294
5218	BPI INVENTORY CONTROL	B	395 294
5217	BPI JOB COSTING	B	595 446
5216	BPI PAYROLL	B	395 294
5220	CHURCH MANAGEMENT	B	495 294
5221	CHURCH MANAGEMENT *DEMO	B	33
5219	TIME ACCOUNTING SYSTEM	B	395 255

** BRODERBUND SOFTWARE			
5222	AE	R	35 26
5249	ALIEN RAIN-GALAXIAN	R	25 20
5226	APPLE PANIC	R	30 22
5227	ARCADE MACHINE II	R	60 44
5228	BANK STREET WRITER	B	70 50
5253	BSI ACCOUNTS PAYABLE	B	295 227
5224	BSI ACCOUNTS RECEIVABLE	B	395 272
5254	BSI GENERAL LEDGER	B	395 296
5223	BSI GENERAL LEDGER W/PAYABLES	B	495 340
5225	BSI PAYROLL	B	395 272
5229	CHOPLIFTER	R	35 26
5238	DAVIDS MIDNIGHT MAGIC	R	35 26
5247	DEMON DERBY	R	25 20
5230	DUELING DIGITS	R	30 22
5255	GALACTIC EMPIRE	R	25 19
5232	GALACTIC REVOLUTION	R	25 19
5231	GALACTIC TRADER	R	25 19
5233	GALAXY WARS	R	25 20
5234	GENETIC DRIFT	E	30 22
5235	GOLDEN MOUNTAIN	R	20 16
5236	GUMBALL FACTORY	R	30 22
5237	LABYRINTH	R	30 22
5256	LAST REDDOBT	R	26 21
5251	LODE RUNNER	R	35 26
5257	MAZE MACHINE	R	60 44
5250	QUESTRON	R	45 33
5239	RED ALERT	R	30 22
5240	SEA FOX	R	30 22
5241	SERPENTINE	R	35 26
5244	SKY BLAZER	R	32 24
5242	SPACE QUARKS	R	30 22
5243	SPACE WARRIOR	R	25 19
5252	SPARE CHANGE	R	35 26
5245	TANK COMMAND	R	15 12
5248	TAWALAS LAST REDDOBT	R	30 22
5246	TRACK ATTACK	R	30 22

** BUDGEGO			
5259	PINBALL CONSTRUCTION SET	R	40 32
5258	RASTER BLASTER	R	30 24

** BUSINESS SOLUTIONS			
5260	INCREDIBLE JACK	B	179 161

** CALIFORNIA PACIFIC COMPUTER			
5265	AKALABETH-WORLD OF DOOM	R	35 26
5266	APPLEIDS & CHIPOUT	R	30 22
5268	BRAINTEASER BOULEVARD	R	25 19
5269	CHIRP	R	25 19
5272	COSMO MISSION SUPER INVADERS	R	25 20
5270	DESECRATION	R	40 32
5263	FENDER BENDER	R	25 19
5264	GRAPHIC 3D SYSTEM-BUDGE	B	40 29
5271	HUNGRY BOY	R	25 20
5262	SPACE ALBUM-BUDGE	R	40 29
5261	TRILOGY OF GAMES-BUDGE	R	30 22
5267	ULTIMA	R	40 29

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** CAVALIER COMPUTER			
5273	ASTEROID FIELD	R	30 22
5275	BUG ATTACK	R	30 22
5276	MICRO WAVE	R	35 26
5277	STAR THIEF	R	30 22
5274	TELEPORT	R	30 22

** CAXTON SOFTWARE			
5771	CARDBOX (B* CP/M)	B	245 173

** COEX			
5278	TRAINING FOR VISICALC	E	60 48

** COMPUTER DATA SYSTEMS			
5279	MEMORY MANAGEMENT SYSTEM II	U	50 33
5280	MEMORY MANAGEMENT SYSTEM-CORVUS	U	100 84

** CENTRAL POINT SOFTWARE			
5281	COPY II PLUS	U	40 27
5282	FILER, THE	U	20 14

** CMA MICRO COMPUTER DIVISION			
5287	ACADEMIC SECRETARY	E	250 224
5305	APPOINTMENT CALENDAR	B	100 91
5292	ATTENDANCE	E	300 262
5284	CIRCUIT ANALYSIS	D	150 135
5283	CLASS SCHEDULING	E	350 306
5319	CLIENT MEDICAL BILLING (BO COL)	B	1596 1235
3431	CMA LIGHT PEN	E	80 74
5294	CMA LIGHT PEN QUIZ	E	50 47
5310	CONSTRUCTION ACCOUNTING SYSTEM	B	796 639
5320	DENTAL OFFICE MANAGEMENT I	B	860 690
5321	DENTAL OFFICE MANAGEMENT II	B	1296 1015
5322	DENTAL OFFICE MANAGEMENT IIC	B	1696 1211
5285	DOCUMETER TEXT PROCESSOR	B	200 179
5286	DOCUMETER TP-HARD DISK VERSION	B	250 224
5295	ELECTRIC GRADE BOOK	E	50 47
5293	GRADING SYSTEM	E	300 262
5311	JOB COST ACCOUNTING	B	460 402
5290	MASTER MAILING LIST	E	90 82
5299	MASTER TEXT PROCESSOR	B	140 126
5313	MEDICAL OFFICE MANAGEMENT I	B	796 639
5312	MEDICAL OFFICE MANAGEMENT II	B	1196 948
5314	MEDICAL OFFICE MANAGEMENT IIC	B	1596 1235
5315	MEDICAL OFFICE MANAGEMENT IIL	B	1196 948
5318	MEDICARD (REQ VISICALC 3.3 68K)	B	250 224
5316	MEDIREC	B	350 306
5317	MEDIREC-HARD DISK VERSION	B	400 350
5289	MID-TERM REPORT	E	250 224
5298	ONE-TYPE ACCOUNTING	B	120 108
5304	PAYCHECK (REQ PRINT CHECK ACT6)	B	140 126
5309	PAYRECORD	B	130 117
5302	PAYROLL I	B	120 108
5306	PERSONAL ACCOUNTING	B	70 64
5303	PRINT CHECK ACCOUNTING	B	140 126
5301	PROFESSIONAL OFFICE MANAGEMENT	B	696 601
5300	PROJECT MANAGEMENT	B	95 86
5307	REPROGRAMMABLE DATA BASE	B	100 91
5308	REPROGRAMMABLE DATA BASE PLUS	B	150 135
5291	STATISTICS PAC	B	100 91
5296	STOCK PORTFOLIO	B	140 126
5297	SUCCESS DESK ACCOUNTING SYSTEM	B	350 306
5288	TEACHER PLUS PAC	E	70 64

** COMMSOFT			
5323	ROOTS/M (CP/M)	O	195 150

** COMMUNITREE GROUP			
5324	COMMUNITREE I (MMII)	O	250

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** COMPUTEK			
5326	CRIBBAGE II	R	30 22
5325	SOLITAIRE	R	30 22

** COMPUTER ADVANCED IDEAS			
5338	BASIC SKILLS (REQ MM)	E	20 16
5343	BUG BYTER	E	48 38
5341	FOREIGN LANGUAGES (REQ MM)	E	20 16
5333	FUN WITH FACTS I (REQ TTS)	E	20 16
5334	FUN WITH FACTS II (REQ TTS)	E	20 16
5327	GAME SHOW-65	E	40 32
5335	HISTORY (REQ TTS)	E	20 16
5337	MASTER MATCH-MM	E	40 32
5340	MATH & SOCIAL STUDIES (REQ MM)	E	20 16
5331	MOVIES & TV (REQ 65)	E	20 16
5330	PEOPLE PLACES (REQ 65)	E	20 16
5339	SCIENCE & MATH (REQ MM)	E	20 16
5336	SPORTS FACTS (REQ TTS)	E	20 16
5332	TIC TAC SHOW-TTS	E	40 32
5347	ULTRA DISK TEST	U	30 24
5345	ULTRA FAST COPY	U	30 24
5346	ULTRA FAST LOADER	U	30 24
5344	ULTRA TEST/COPY/LOADER COMBO	U	60 48
5328	WIN WITH WORDS I (REQ 65)	E	20 16
5329	WIN WITH WORDS II (REQ 65)	E	20 16
5342	WIZARD OF WORDS	E	40 32

** COMPUTER APPLICATIONS			
5348	APPLE LINK (MMII)	O	60 52
5349	NIBBLES AWAY II	U	70 55

** COMPUTER STATIONS			
5350	COMBINED ENHANCED GRAPHICS	B	35 24
5351	GRAPHIC WRITER	B	55 37
5355	MACRO-SCED-SCREEN EDITOR	U	50 33
5356	SOME COMMON BASIC PROGRAMS	U	40 27
5352	ULTRA HIRES GRAPHICS IDS440/445	B	50 33
5353	ULTRA HIRES GRAPHICS IDS460/560	B	50 33
5354	ULTRA HIRES GRAPHICS MX80/100	B	50 33

** COMPUTERWORKS			
5357	MAILMATE	B	99 59

** COMSHARE TARGET SOFTWARE			
*** ALL REQUIRE CP/M & 64K			

5362	MASTER PLANNER	B	325 250
5359	PLANNER CALC	B	99 78
5361	PLANNER CALC & APPL PAC	B	125 71
5360	PLANNER CALC APPL PAC	B	50 40
5358	PLANNER GUIDE	B	99 72

** CONSULTANT SYSTEMS			
5363	REAL ESTATE CONSULTANT 2.0	B	275 224

** CONTEXT MANAGEMENT SYSTEMS			
5364	CONNECTOR, THE (MMII-VISICALC)	O	180 138

** ADVANCED LOGIC SYSTEMS			
3587	CONDOR JUNIOR		195 115
3588	CONDOR I		295 173
3589	CONDOR 3		650 350

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** CONTINENTAL SOFTWARE			
5372	APPLE GRAPHICS ARCADE	B	20 14
5383	APPLE SOFTWARE	O	20 18
5365	COMPUTER BINGO	R	25 18
5366	CROSS COUNTRY RALLY	R	30 21
5377	CSI 1 GENERAL LEDGER	B	250 170
5378	CSI 2 ACCOUNTS RECEIVABLE	B	250 170
5379	CSI 3 ACCOUNTS PAYABLE	B	250 170
5380	CSI 4 PAYROLL	B	250 170
5373	FIRST CLASS MAIL & FORM LETTER	B	75 53
5374	FORM LETTERS FOR APPLE	B	30 21
5367	GUARDIAN	R	30 21
5375	HOME ACCOUNTANT	B	75 53
5382	HOME ACCOUNTANT *DEMO	B	33
5368	HYPERSPACE WARS	R	30 21
5369	LA LAND MONOPOLY	R	30 21
5381	PROPERTY MANAGEMENT	B	495 328
5371	SKIING IN 3D	R	25 18
5376	TAX ADVANTAGE	B	60 42
5370	TORPEDO TERROR	R	25 18

** CRAFTSBURY SOFTWARE			
5384	MAIL MANAGER	B	40
5390	MEMORY JOGGER	B	30
5389	PEOPLE TRACKER	B	30
5392	PEOPLE, MEMORY & PERSONAL PAC	B	50
5391	PERSONAL WEALTH	B	30
5385	RECIPE RETRIEVER	O	30
5388	RECIPE, WINE & RESTAURANT PAC	O	60
5387	RESTAURANT ROSTER	O	30
5386	WINE CONNOISSEUR	O	40

** CRANE SOFTWARE			
5393	MENU GENERATOR	U	40 32

** CREATIVE CURRICULUM			
5398	AMERICA GROWS 1-LEVEL 4	E	80 55
5399	AMERICA GROWS 2-LEVEL 5	E	80 55
5400	AMERICA GROWS 3-LEVEL 6	E	80 55
5401	AMERICA GROWS 4-LEVEL 7	E	80 55
5402	AMERICA GROWS 5-LEVEL 8	E	80 55
5403	AMERICA GROWS 6-LEVEL 9	E	80 55
5396	PHRASE READING 1	E	50 35
5397	PHRASE READING 2	E	60 42
5395	SPEED READING *DEMO	E	11
5394	SPEED READING COURSEWARE	E	99 68

** CUST'MSOFT			
5404	CAREER INVENTORY ASSESMENT	E	80

** CYBERTRONICS INTERNATIONAL			
5405	KAREL THE ROBOT-PASCAL PRGMB	U	242 186

** DAKINS/LEVEL 10			
5409	ALKESTONE	R	29 23
5414	BUDGET PLANNER	B	150 114
5415	BUSINESS BOOKKEEPING SYSTEM	B	395 294
5412	DEPRECIATION PLANNER	B	395 294
5413	DEPRECIATION PLANNER *DEMO	B	8
5406	DRAGON FIRE	R	29 23
5408	FANTASY COMBO	R	49 39
5407	KAVES OF KARKHAN	R	29 23
5417	MIRV	R	25 20
5416	NEUTRONS	R	25 20
5411	PROGRAMMING AIDS 3.3	U	90 70
5410	RINGS OF SATURN	R	29 23
5418	SPACE RESCUE	R	25 20



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## \*\* DANN MCCREARY SOFTWARE \*

5419 ABSOLUTE SECURITY (MMII) 0 80

## \*\* DATA SECURITY CONCEPTS

5420 VISICALC FORMATTING AIDS 4.1 8 55 40

## \*\* DATA TRANSFORMS

5422 FONTRIX 6 75 59

5421 GRAPHTRIX 1.3 6 65 52

## \*\* DATA TREK

5423 MAZE CRAZE CONSTRUCTION SET R 40 32

## \*\* DATAMOST

5463 ARDY THE AARDVARK R 30 22

5460 ARGOS R 30 24

5464 AUTO ATLAS R 30 22

5455 AUTOGRAF (CP/M) B 195

5424 AZTEC ADVENTURE R 40 29

5457 BILESTAD R 30 24

5425 CASINO R 40 29

5458 CONQUERING WORLDS R 30 22

5426 COUNTY FAIR R 30 22

5427 CRAZY MAZY R 30 22

5428 GIN RUMMY R 30 22

5449 MARKET TECHNICIAN, THE B 130 93

5429 MARS CARS R 30 22

5459 MATING ZONE R 30 22

5430 MISSING RING R 30 22

5431 MONEY MUNCHERS R 30 22

5454 MONSTER SMASH R 30 22

5461 MULTIPLOY R 30 24

5444 NEW HUMAN FLY R 30 22

5443 OIL RIG R 30 24

5432 PANDORAS BOX R 30 22

5448 PERSONAL LEDGER B 130 93

5433 PIG PEN R 30 22

5450 PROPERTY MANAGER, THE B 295 208

5445 REAL ESTATE ANALYSIS PAC-REAP B 130 93

5446 REAL ESTATE INVESTMENT B 130 93

5453 ROUNDABOUT R 30 22

5434 SNACK ATTACK R 30 22

5435 SOLITAIRE &amp; CRIBBASE R 35 26

5465 SPACE ARK R 35 28

5462 SPACE KADET R 30 22

5436 SPECTRE R 35 26

5437 SWASHBUCKLER B 130 93

5447 TAX BEATER R 30 22

5439 THAROLIAN TUNNELS R 30 22

5438 THIEF R 30 22

5440 TUBENAY II R 35 26

5456 VEGAS VIDEO R 30

5441 VORTEX R 30 22

5451 WIZ PLUS R 40 29

5442 WORLD SERIES BASEBALL R 30 22

5452 WRITE ON B 130

## \*\* DATASOFT

5472 BASIC COMPILER, THE U 100 79

5466 CANYON CLIMBER R 25 19

5467 FATHOMS 40 R 25 19

5470 LISP INTERPRETER APP-L-ISP U 100 72

5469 MICROPAINTER G 35 28

5473 MOON SHUTTLE R 30 24

5471 TUMBLE BUGS R 30 24

5468 ZAXXON R 40 29

## \*\* DAVIDSON &amp; ASSOCIATES

5475 MATH BLASTER E 50 40

5476 SPEED READER II E 70 55

5474 WORD ATTACK E 50 40

## \*\* DAVKA

5501 A VISIT TO JERUSALEM E 25 22

5496 AFIKOMAN ADVENTURE E 30 26

5489 ALL ABOUT CHANUKAH E 30 26

5491 ALL ABOUT PASSOVER E 30 26

5490 ALL ABOUT PURIM E 30 26

5515 BAR/BAT MITZVAH TRAINING E 150 125

5516 BAR/BAT MITZVAH W/TAPE MUSIC E 175 146

5517 BAR/BAT SPECIAL INFO JS REQ'D!! E 25 22

5498 BIRLE BASEBALL E 20 18

5514 BRACHOT BOXES E 17 15

5497 CATCH A HAMANTASH E 75 64

5483 CHUMASH COMPU-FLASH SET E 25 22

5486 COMPU-DIKDUK E 25 22

5519 CRUMB EATER E 50 43

5479 DYNAMIC HEBREW DICTIONARY E 15 14

5480 DYNAMIC HEBREW DICTIONARY \*DEMO E 30 26

5500 FROM DREAM TO REALITY-AVAL SEP E 30 26

5495 GAME OF JERICHO E 25 22

5494 GAME OF THE MACCABEES E 25 22

5513 HALACHIC Z'MANIM E 225 188

5478 HEBREW HARDWARE EPROM KIT E 75 64

5484 HEBREW READING E 75 64

5477 HEBREW WRITER-REQ ZOOM GRAPHICS E 15 14

5493 HOW TO BAKE CHALLAH-AVAL SEP E 30 26

5492 HOW TO CONDUCT A SEDER E 25 22

5502 ISRAEL GEOGRAPHY GAME E 25 22

5508 JEWISH I.Q. BASEBALL E 35 30

5509 JEWISH I.Q. BASEBALL-TEACHERS E 25 22

5505 JUDAISM AND CHARITY E 25 22

5504 JUDAISM AND PRAYER E 25 22

5506 PROVERBS E 25 22

5499 PURIMAZE E 25 22

5485 READING RASHI E 30 26

5487 ROSH HASHANA E 25 22

5503 SIDDUR GEOGRAPHY-AVAL SEP E 30 26

5488 SUKKOT E 25 22

5510 TANNAIN AND AMORAIM E 35 30

5507 THE JEWS IN SPAIN E 25 22

5511 THE TEN COMMANDMENTS-AVAL SEP E 25 22

5512 TORAH AND HAFTORAH BLESSINGS E 20 18

5518 TORAH TRANSLATION-AVAL SEP E 20 18

5482 WRITE HEBREW-ADULT E 20 18

5481 WRITE HEBREW-CHILDREN E 20 18

ZOOM GRAPHICS-SEE PHOENIX

## \*\* DELTA SOFTWARE

5521 BOOKKEEPER CHECK WRITER, THE B 40 32

5520 BOOKKEEPER MASTER PROGRAM, THE B 90 71

## \*\* DENVER SOFTWARE

5522 FINANCIAL PARTNER (NO 80 COL) B 245 172

5526 FINANCIAL PARTNER \*DEMO B 53

5525 FLIP CHART \*DEMO E 53

5524 PASCAL PROGRAMMER (64K) E 296 209

5527 PASCAL PROGRAMMER \*DEMO E 53

5523 PASCAL TUTOR E 125 88

## \*\* DESIGN TRENDS \*

5528 SOFTAX (REQ VISICALC) B 395

## \*\* DESIGNWARE

5532 CREATURE CREATOR E 40 31

5530 CRYPTO CUBE E 40 31

5531 SPELLICOPTER E 40 31

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## \*\* DYNACOMP \*

ACTIVE CIRCUIT ANALYSIS (ACAP) 0 44

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BATTLEFIELD R 24

BEAM DEFLECTION 0 40

BLACK HOLE R 20

BLACKJACK COACH R 34

BRIDGE MASTER R 30

CELESTIAL BASIC E 50

CHILDRENS CAROUSEL E 20

DATA SMOOTHER U 24

DIGITAL FILTER 0 54

FAMILY BUDGET, THE B 35

FILTER ANALYSIS 0 34

FLIGHT SIMULATOR R 24

FOURIER ANALYZER 0 24

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GAMES PAC II R 19

GO FISH R 19

HARMONIC ANALYZER 0 34

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LOGIC SIMULATOR 0 44

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MENSA MASTER R 20

MICROCOMPUTER STOCKS-MSP B 60

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MOONPROBE R 17

OLDE GIN PARLOUR-GIN RUMMY R 23

PAYFIVE-PAYROLL B 150

PERSONAL FINANCE SYSTEM B 40

POKER MACHINE R 20

POKER PARTY R 24

PORTFOLIO MANAGEMENT B 70

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REGRESSION II 0 24

REGRESSION MULTI I &amp; II 0 64

REGRESSION MULTILINEAR 0 29

ROOTS R 20

SCIENTIFIC SUBROUTINES I 0 54

SCIENTIFIC SUBROUTINES II 0 130

SHAPE MAGICIAN, THE G 30

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SPACE EVACUATION R 20

SPACE LANES R 15

SPACE TILT R 19

STARBASE 3.2 R 18

STARSHIP LANDING PARTY R 20

STATISTICAL SUBROUTINES I 0 100

STATTEST 0 34

STOCK MASTER/STOCK PLOT B 60

TAX OPTIMIZER B 60

TEACHERS AIDE-MATH GRADES 1-6 E 18

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UTIL-APPLESOFT DISK UTILITY U 20

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## \*\* EAGLE SOFTWARE PUBLISHING

5557 MONEY DECISIONS \*DEMO B 4

5555 MONEY DECISIONS I B 199 153

5556 MONEY DECISIONS I &amp; II PAC B 399 299

5558 MONEY DECISIONS II B 229 176

## \*\* EARTHWARE COMPUTER SERVICES

5550 STAR SEARCH E 45 32

5553 STAR SEARCH-EDUCATION VERSION E 45 32

5551 VOLCANOES E 50 36

5552 ZOO MASTER - COMING SOON R 30

## \*\* EASTERN SOFTWARE/LOGICAL CHC

5554 CASTLES OF DARKNESS R 35 26

## SOFTWARE-APPLE

NMNR P ITEM

T LIST SELL

## \*\* DEVELOPMENTAL LEARNING MAT

5533 ALIEN ADDITION-HOME E 29 28

5534 ALIEN ADDITION-SCHOOL E 39 37

5535 ALLIGATOR MIX-ADD/SUB-HOME E 29 28

5536 ALLIGATOR MIX-ADD/SUB-SCHOOL E 39 37

5537 DEMOLITION DIVISION-HOME E 29 28

5538 DEMOLITION DIVISION-SCHOOL E 39 37

5539 DRAGON MIX-MUL/DIV-HOME E 29 28

5540 DRAGON MIX-MUL/DIV-SCHOOL E 39 37

5541 METEOR MULTIPLY-HOME E 29 28

5542 METEOR MULTIPLY-SCHOOL E 39 37

5543 MINUS MISSION-HOME E 29 28

5544 MINUS MISSION-SCHOOL E 39 37

## \*\* DICKENS DATA SYSTEMS

5546 SUPERPLOTTER B 70 70

5547 WALL STREET &amp; SUPERPLOTTER B 195 175

5545 WALL STREET PLOTTER B 125 125

## \*\* DIGITAL MARKETING

## \*\*\* ALL REQUIRE CP/M

5550 BIBLIOGRAPHY B 125 112

5551 CARDFILE B 89 81

5552 CBASIC 2 U 150 109

5553 DATERBOOK II B 295 258

5554 DENTAL PRACTICE MANAGEMENT B 995 849

5555 FILEFIX B 89 81

5556 FOOTNOTE B 125 112

5557 GRAMMATIK B 75 69

5558 HYPER TYPER E 50 47

5559 IBR B 125 112

5549 MICRO LINK II (MMII/SM300/1200) 0 89 81

5548 MILESTONE-PROJ MGMT/SCHED (CPM) B 295 227

5560 NOTEBOOK B 150 135

5561 ORQUEST R 40 37

5562 PERSONAL DATEBOOK B 150 135

5563 PLAN 80 B 295 258

5564 PROOFREADER B 50 47

5565 SPECIALIST-MULTI B 1495 1246

5565 SPECIALIST-SINGLE B 995 849

5567 SPELLBINDER B 495 281

5568 SYNOPSIS B 89 81

## \*\* DIGITAL RESEARCH

5569 C BASIC (CP/M) U 150 115

5570 CB-80 (CP/M) U 500 375

5571 PASCAL MT+ (CP/M) U 350 263

5572 SPEED PROGRAMMING PK6 (CP/M) U 200 154

## \*\* DJR ASSOCIATES

## \*\*\* ALL REQUIRE CP/M

5573 FMS-80-DATA BASE B 395 250

5574 FMS-81-THE SECRETARY B 250 163

5575 FMS-82-LANGUAGE SYSTEM B 145 95

5576 VIDEO TAPES B 100 97

## \*\* DON'T ASK SOFTWARE

5580 ABUSE 0 20 16

5578 CLAIM TO FAME (REQ WR) R 20 16

5579 SAM-SPEECH SYNTHESIZER 0 125 97

5577 WORD RACE R 25 19

## \*\* DOUBLE GOLD SOFTWARE

5581 RUBIKS CUBE UNLOCKED R 25 20

## \*\* DOW JONES SOFTWARE

5585 DOW JONES CONNECTOR B 95 75

5582 DOW JONES MARKET ANALYZER B 350 294

5584 DOW JONES MARKET MANAGER B 300 250

5583 DOW JONES MARKET MICROSCOPE B 700 577

\* SEE PAGE 3, MISSING PRICES



## SOFTWARE-APPLE

NMBR P ITEM T LIST SELL

## \*\* EDU FUN-MILLIKEN PUBLISHING

5595	ALIEN COUNTER/FACE FLASH	E	33	27
5600	BATTLING BUGS/CONCENTRATION	E	33	27
5599	FRENZY/FLIP FLOP	E	33	27
5598	GOLF CLASSIC/COMPU BAR	E	33	27
5597	GOLF/ARROW GRAPHICS	E	33	27
5596	JAR GAME/CHAOS	E	33	27

## \*\* EDU WARE SOFTWARE

5601	ALGEBRA VOL 1	E	40	32
5602	ALGEBRA VOL 2	E	40	32
5603	ALGEBRA VOL 3	E	40	32
5604	ALGEBRA VOL 4	E	40	32
5605	ALGEBRA VOL 5 & 6	E	50	40
5605	COMPU-MATH: ARITHMETIC SKILLS	E	50	40
5615	COMPU-READ 3.0	E	30	24
5616	COMPU-SPELL (REQ DATA DISK)	E	30	24
5614	COMPU-SPELL DATA ADULT/SECR	E	20	16
5619	COMPU-SPELL DATA GRADE 4	E	20	16
5610	COMPU-SPELL DATA GRADE 5	E	20	16
5611	COMPU-SPELL DATA GRADE 6	E	20	16
5612	COMPU-SPELL DATA GRADE 7	E	20	16
5613	COMPU-SPELL DATA GRADE 8	E	20	16
5616	COUNTING BEE	E	30	24
5607	DECIMALS 3.0	E	49	39
5623	EMPIRE 1: WORLD BUILDERS	R	33	27
5624	EMPIRE 2: INTERSTELLAR SHARKS	R	33	27
5636	EMPIRE 3: ARMAGEDDON	R	33	27
5606	FRACTIONS 3.0	E	49	39
5634	HANDS ON BASIC PROGRAMMING	E	79	62
5617	METRI-VERT	U	20	16
5625	NETWORK	R	20	16
5619	PERCEPTION GAMES (REQ GAME PDL)	E	25	20
5626	PRISONER 2, THE	R	33	27
5618	PSAT WORD ATTACK SKILLS	E	49	39
5627	RENDEZVOUS	R	40	32
5620	SAT WORD ATTACK SKILLS	E	49	39
5628	SPACE	R	30	22
5629	SPACE 2	R	25	19
5622	SPELLING & READING PRIMER	E	40	32
5632	SPELLING BEE GAMES	E	30	24
5621	STATISTICS	U	30	24
5630	TERRORIST	R	30	24
5635	UNI-SOLVE	U	25	20
5631	WINDFALL	R	20	16

## \*\* ELECTRONIC ARTS \*

5638	AXIS ASSASSIN	R	35	
5637	HARD HAT HACK	R	35	
5639	PJNBALL CONSTRUCTION SET	R	40	
5640	THE LAST GLADIATOR	R	35	

## \*\* ELECTRONIC COURSEWARE SYSTEM

5647	EAR CHALLENGER	E	40	32
5642	ECS COMPUTERIZED GRADEBOOK	E	50	40
5648	ELEMENTS OF MATHEMATICS	E	50	40
5643	ELEMENTS OF MUSIC	E	100	79
5646	KEY SIGNATURES	E	40	32
5644	PITCH NAMES	E	40	32
5645	PITCHES ON THE KEYBOARD	E	40	32

Procedure:  
If you want to  
Get something done,  
You have to start.

NMBR P ITEM T LIST SELL

## \*\* EPYX/AUTOMATED SIMULATIONS

5649	CRUSH CRUMBLE & CHOMP	R	30	22
5650	CURSE OF RA	R	20	16
5651	DANGER IN DRINDISTI	R	20	15
5648	DATESTONE/MORLOC/RESCUE COMBO	R	50	40
5652	DATESTONES OF RYM	R	20	16
5653	DRAGONS EYE	R	30	24
5654	FORE	R	30	24
5655	HELLFIRE WARRIOR	R	40	32
5656	INVASION ORION	R	25	20
5657	JABBERTALKY	E	30	24
5667	KEYS TO ACHEMON, THE	R	20	16
5658	MORLOC'S TOWER	R	20	16
5659	NEW WORLD	R	30	24
5660	DIL BARONS	R	100	72
5661	RESCUE AT RIGEL	R	30	24
5670	RICOCHET	R	20	16
5662	SORCERER OF SIVA	R	30	24
5663	STAR WARRIOR	R	40	32
5664	STARFLEET ORION	R	25	19
5666	TEMPLE OF APSHAI	R	40	32
5665	TUESDAY MORNING QUARTERBACK	R	30	24
5669	UPPER REACHES OF APSHAI	R	20	16

## \*\* EXCALIBUR TECHNOLOGIES \*

5671	SAVVY (CP/M)	B	950	
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## \*\* EXECUWARE

5676	E.O.O.	B	175	136
5673	FINANCIAL ANALYSIS	B	93	73
5675	KNOW YOUR CLIENT	B	125	98
5674	REAL ESTATE ANALYSIS	B	275	213

## \*\* EZ TAX

5677	EZ TAX	B	70	51
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## \*\* FEROX MICROSYSTEMS \*

5678	LOGON (MMII/SM300)	U	150	
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## \*\* FIRST SOFTWARE

5679	MICROMODEM II TUTORIAL	U	60	
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## \*\* FLIGHT OPFS

5680	FLIGHT PLANNER (MMII)	U	470	
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## \*\* FLOWERSOFT

5683	BANNER	B		
5682	D-LABELS+	B		
5681	DATA BANK-RELATIONAL DB	B	170	131
5684	VC SECRETARY (IN DEVELOPMENT)	B		

## \*\* FOUNTAIN COMPUTER PRODUCTS

5686	TEKTERM (APPLE CAT II)-AVAL JUN 0	U		
5685	TEKTERM (MMII/APPLE COMCARD)	U	90	77

## \*\* FOX &amp; GELLER

## \*\*\* ALL REQUIRE CP/M CARD

5688	dGRAPH	G	295	227
5769	dGRAPH (8" CP/M)	G	295	227
5689	dUTIL	U	99	77
5770	dUTIL (8" CP/M)	U	99	77
5687	QUICKCODE	U	295	227
5768	QUICKCODE (8" CP/M)	U	295	227
5692	QUICKSCREEN (CBASIC)	U	149	135
5690	QUICKSCREEN (FMS-80)	U	149	135
5691	QUICKSCREEN (MBASIC)	U	149	135

NMBR P ITEM T LIST SELL

## \*\* FUNTASTIC

5693	SPACE KADETTIS	R	35	28
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## \*\* FYI SOFTWARE

5694	SUPERFILE	B	195	138
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## \*\* GALFO WB4JMD

5695	COMMUNICATIONS PAC	U	30	
5696	SLOW-SCAN TELEVISION PAC	U	30	

## \*\* GEBELLI SOFTWARE

5697	EGGS IT	R	30	22
5698	FIREBIRD	R	30	22
5699	HIGH ORBIT	R	30	22
5700	HORIZON 5	R	35	26
5701	LAZER SILK	R	30	22
5702	NEPTUNE	R	30	22
5703	PHAZER FIRE	R	30	22
5704	RUSSKY DUCK	R	35	26
5705	ZENITH	R	35	26

## \*\* GENTRY SOFTWARE

5706	ALIEN MUNCHIES	R	20	16
5707	HANDY DANDY	R	20	16

## \*\* GMS SYSTEMS

5708	POWER BASE W/DATAZOOM	U	475	356
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## \*\* GOURMET SOFTWARE

5709	PIZZA PROGRAM, THE	U	35	23
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## \*\* H&amp;E COMPUTRONICS

5716	BUSINESS PAC 100	B	100	79
5718	MARKET PAC	B		
5717	MASTER PAC 100	B	100	79
5715	VERSABUSINESS SERIES COMPLETE	B	550	411
5714	VERSAINVENTORY	B	100	79
5710	VERSALEDGER II	B	150	115
5713	VERSAPAYABLES	B	100	79
5711	VERSAPAYROLL	B	100	79
5712	VERSARECEIVABLES	B	100	79

## \*\* H&amp;H SCIENTIFIC

5719	STOCK OPTION ANALYSIS	B	250	224
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## \*\* HAL LABS

5721	SHEILA	R	25	19
5720	TAXMAN	R	25	19

## \*\* HARCOURT BRACE JOVANOVIH

5724	COMPUTER ACT (AVAIL AUG 83)	E	80	63
5723	COMPUTER BRE	E	90	71
5722	COMPUTER SAT	E	80	63

## \*\* HARVARD ASSOCIATES

5725	BOSTON READABILITY ANALYZER	B	300	231
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## SOFTWARE-APPLE

NMBR P ITEM T LIST SELL

## \*\* HAYDEN SOFTWARE

5751	ALIBI	R	25	
5748	BELLHOP	R	35	
5747	CHAMPIONSHIP GOLF	R	25	
5766	CLASSROOM GRADE MANAGEMENT SYS	E	150	
5767	COMPILER PLUS (8" CP/M)	U	100	78
5726	COMPILER PLUS-APPLESOFT	U	100	78
5745	CRIMESTOPPER	R	35	
5744	CRYSTAL CAVERNS	R	35	
5734	FINAL CONFLICT	R	35	27
5755	GO	R	35	27
5761	GREAT MAINE TO CALIFORNIA RACE	R	35	
5759	HOW TO PROGRAM IN APPLESOFT	E	50	39
5741	HSI-AP (8" CP/M)	B	449	331
5740	HSI-AR (8" CP/M)	B	449	331
5739	HSI-BL (8" CP/M)	B	449	331
5743	HSI-INVENTORY (8" CP/M)	B	449	331
5742	HSI-PAYROLL (8" CP/M)	B	449	331
5727	KAMIKAZE	R	35	27
5752	KING CRIBBAGE	R	25	
5750	KLONDIKE 2000	R	25	
5746	LASER BOUNCE	R	35	
5762	MICRO ADDITION FOR KIDS	E	30	23
5765	MICRO DIVISION FOR KIDS	E	30	
5764	MICRO MULTIPLICATION FOR KIDS	E	30	
5763	MICRO SUBTRACTION FOR KIDS	E	30	23
5756	MICROSCOPIC JOURNEY	R	35	27
5757	MICROTYPING II	E	30	23
5760	MUSICAL MATH	E	35	
5737	ORCA/M OBJ/ASSEM (64K)	U	100	72
5735	PIE: COMMUNICATIONS	B	100	
5729	PIE: WRITER (REQ BO COL CARD)	B	150	111
5728	PIE: WRITER-DBL VISION	B	150	111
5730	PIE: WRITER-NEW VERSION	B	150	111
5758	PROGRAMMERS WORKSHOP-APPLESOFT	E	50	37
5731	REVERSAL	R	35	27
5732	SARGON II	R	35	27
5738	SHAPES IN COLOR	B	50	39
5733	SHUTTLE INTERCEPT	R	35	27
5749	STAR TRADERS	R	25	
5736	STATMANAGER (CP/M)	B	250	
5753	TETRAD	R	25	
5754	WARGLE	R	35	

## \*\* HAYES MICROCOMPUTER PRODUCTS

5774	TERMINAL (REQ MMII 8" CP/M)	U	25	24
5773	TERMINAL (REQ MMII)	U	99	70

## \*\* HFK SOFTWARE

## \*\* SPECIFY PRINTER !!

5775	QWERTY (64K & CP/M)	B	325	284
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## \*\* HIGH TECHNOLOGY \*

5776	BUDGETEER	B		
5777	CHEM LAB SIMULATIONS	E		
5778	CLIENT BILLING SYSTEM	B		
5779	COMMON BASIC PROGRAMS	U		
5780	DATA MASTER	B		
5781	DISK-O-CHECK	B		
5782	DOCTORS OFFICE COMPANION	B		
5783	DOCTORS OFFICE COMPANION-HARD D	B		
5784	ELECTRONIC SECRETARY	B		
5785	ESTIMATOR	B		
5786	INFORMATION MASTER	B		
5787	INFORMATION MASTER & TRANSIT	B		
5788	JOB CONTROL SYSTEM-100 JOBS	B		
5789	JOB CONTROL SYSTEM-400 JOBS	B		
5790	JOB CONTROL SYSTEM-600 JOBS	B		
5791	LAB STATISTICS	B		
5792	OIL & GAS COMPANION	B		
5793	ORDER SCHEDULER	B		
5794	PRACTICAL BASIC PROGRAMS	U		
5795	PRINTERS ESTIMATOR	B		
5796	STORE MANAGER-THE CASHIER	B		
5797	TOOL	B		
5798	TRANSIT	B		



## SOFTWARE-APPLE

NMBR	P	ITEM	T	LIST	SELL
** HIGHLANDS COMPUTER SERVICES					
5807		COSMIC COMBAT	R	30	24
5799		CRAE 2.0-APPLESOFT EDITOR	U	40	32
5803		CREATURE VENTURE	R	25	30
5808		EZ INVOICE	B	60	52
5806		EZ LEDGER	B	60	48
5804		GOBLINS	R	28	22
5800		MCAT 2.0-MASTER CATALOG/SORT	U	25	20
5805		MUMMYS CURSE	R	30	24
5801		OLDORFS REVENGE	R	20	16
5802		TARTURIAN	R	25	20

** HOWARD SOFTWARE SERVICES					
5814		CREATIVE FINANCING	B	195	150
5816		REAL ESTATE ANALYZER *DEMO	B		33
5815		REAL ESTATE ANALYZER 2	B	195	150
5809		TAX PREPARER 1983	B	225	173
5811		TAX PREPARER CA '83 SUPPLMT	B	75	59
5810		TAX PREPARER FEDERAL	B	150	115
5813		TAX PREPARER IL	B	75	59
5812		TAX PREPARER NY/NJ	B	75	59

** HOWARD W SAMS					
5818		ACTIVE FILTER DESIGN	Q	40	32
5830		APPLE-AIDS	U	50	40
5831		BUSICOMP	B	1500	915
5832		BUSICOMP-HARD DISK VERSION	B	1500	915
5835		BUSINESS PLUS	B	400	299
5838		CAVES OF OLYMPUS	R	40	32
5820		ELECTRONICS I	Q	40	32
5821		ELECTRONICS II	Q	40	32
5822		ELECTRONICS III	Q	40	32
5840		FINANCIAL FACTS	B	60	48
5844		FINANCIAL PLANNING W/MULTIPLAN	B	80	63
5845		FINANCIAL PLANNING W/VISICALC	B	80	63
5836		HELLO CENTRAL!	Q	99	78
5843		INSTANT RECALL	B	60	48
5841		MONEY TOOL	B	60	48
5825		MOSTLY BASIC-EDUCATIONAL	E	30	24
5826		MOSTLY BASIC-HOUSEHOLD	E	30	24
5827		MOSTLY BASIC-INTERFACING/SCIENCE	E	30	24
5837		MUSIC GAMES	E	40	32
5839		P.D.Q.	R	60	48
5842		PEN PAL	B	60	48
5817		PLOTTING GRAPHS FOR PRINTER	G	40	32
5823		PLOTTING GRAPHS FOR VIDEO	Q	40	32
5833		PROGRAMMER, THE	U	200	154
5834		PROGRAMMER, THE (CP/M)	U	200	154
5819		STATISTICS & REGRESSION ANAL	Q	40	32
5828		TIME DUNGEON-U.S., THE	E	30	24
5829		TIME DUNGEON-WORLD, THE	E	30	24
5824		VOYAGE OF THE VALKYRIE	R	40	32

** HUMAN SYSTEMS DYNAMICS-HSD					
5849		ANOVA II	B	150	115
5854		APPLE FACTOR (IN DEVELOPMENT)	B		
5853		CALCU-PLOT (IN DEVELOPMENT)	B	150	
5851		GRAF-PAK	B		
5846		HSD ANOVA	B	75	59
5848		HSD REGRESS	B	100	78
5847		HSD STATS	B	100	78
5852		REGRESS II	B	150	115
5850		STATS PLUS	B	200	154

** IDEAL SYSTEMS					
5857		INTROSTAT 2.2-COPY PROTECTED	B	85	78
5856		INTROSTAT 2.2-UNPROTECTED	B	125	112
5858		P.A.S.E. (AVAIL JUNE)	B	145	130

NMBR	P	ITEM	T	LIST	SELL
** INFOCOM					
5859		DEADLINE	R	50	37
5860		STARCROSS	R	40	29
5864		SUSPENDED	R	50	37
5865		WITNESS	R	50	40
5861		ZORK I-UNDERGROUND EMPIRE	R	40	29
5862		ZORK II-WIZARD OF FRODOZZ	R	40	29
5863		ZORK III-DUNGEON MASTER	R	40	29

** INFORMATION UNLIMITED-IUS					
5866		DATADIX	B	150	106
5867		DATADIX-HARD DISK VERSION	B	300	212
5870		EASY MAILER	B	70	51
5871		EASY MAILER PRO (80 COL)	B	150	106
5872		EASY MOVER-40/80 COL	B	100	72
5868		EASY WRITER	B	100	72
5873		EASY WRITER & MAILER	B	145	104
5874		EASY WRITER & MAILER (80 COL)	B	300	212
5869		EASY WRITER PRO (80 COL)	B	175	123
5875		FORTH DEVELOPMENT SYSTEM	U	140	108
5876		TELLSTAR LEVEL 1-ASTRONOMY	E	40	32
5877		TELLSTAR LEVEL 2-ASTRONOMY	E	80	63

** INNOVATIVE DESIGN SOFTWARE					
5878		JUGGLER	R	30	22
5879		POOL 1.5	R	35	26
5880		SHUFFLE BOARD	R	30	22
5881		TRICK SHOT	R	40	29

** INSOFT					
5887		ALD SYSTEM II	U	75	59
5885		ELECTRIC DUET	R	30	24
5888		GRAFORTH 2	U	75	54
5884		GRAPPLE	U	30	22
5882		SPIDER RAID	R	30	22
5886		TRANSFORTH II	U	125	97
5883		ZAROS	R	35	26

** INTELCON DATA SYSTEMS					
5889		TRADER DECISION SYSTEM I	B	195	185

** INTELLIGENT STATEMENTS/ ** SCREENPLAY					
5890		PROFESSIONAL BLACKJACK	R	70	53
5891		WARRIOR OF RAS-DUNZHIN	R	40	32
5892		WARRIOR OF RAS-KAJV	R	40	32

** INTERNATIONAL SOFTWARE MKTG					
5895		GRAPH & MATH MAGIC	B	150	106
5893		GRAPH MAGIC	B	90	63
5894		MATH MAGIC	B	90	63
5912		MATH MAGIC (8" CP/M)	B	100	72
5896		PRISM	R	20	15

** JRT SYSTEMS *					
5897		JRT PASCAL 3.0 (REQ CP/M)	U	30	

\* SEE PAGE 3, MISSING PRICES

## SOFTWARE-APPLE

NMBR	P	ITEM	T	LIST	SELL
** KATES COMPUTERS *					
** REQ CP/M-80 56K MMII/SM300 0					
5902		ADVISOR CASH MANAGEMENT SYS	Q	200	
5900		ADVISOR INDUSTRY GROUP MODULE	Q	200	
5901		ADVISOR MAIL LIST OPTION	Q	200	
5898		ADVISOR PORTFOLIO MANAGEMENT 4	Q	795	
5899		ADVISOR REPORT GENERATION SYS	Q	500	
5909		ANALYST BRIDGE DATA NEWS MODULE	Q	75	
5905		ANALYST CALCULATOR MODULE	Q	500	
5904		ANALYST INDUSTRY GROUP X REF	Q	200	
5907		ANALYST INTRA DAY MODULE	Q	50	
5906		ANALYST OFF SCREEN TRENDLINES	Q	300	
5903		ANALYST STOCK GRAPHICS SYSTEM 4	Q	795	
5908		ANALYST TIME CLOCK MODULE	Q	150	

** KENSINGTON MICROWARE					
5910		FORMAT II ENHANCED (80 COL)	B	150	115

** KRAFT SYSTEMS					
5911		QUICK-VIZ	B	23	18

** KRELL SOFTWARE					
8255		BOTTICELLI	R	35	33
8242		CLASSROOM MANAGEMENT & ANALYSIS	E	200	179
8241		COLLEGE BOARD WORK SHEET GEN	E	45	42
8240		COLLEGE BOARDS SAT PREP	E	300	262
8246		COMPLETE PACKAGE ALL OPTIONS	E	1999	1666
8244		COMPREHENSIVE INSTRUCTION PAC	E	1695	1413
8253		DESCARTES DELIGHT	R	80	74
8251		ISAAC NEWTON & FG NEWTON	R	50	47
8256		LOGO SPRITE BOARD	U	325	284
8257		LOGO WITH SPRITES	U	400	350
8258		MINDSTORMS	R	15	14
8247		MIT LOGO	U	90	82
8248		ODYSSEY IN TIME	R	40	37
8252		PYTHAGORAS & THE DRAGON	R	40	37
8245		SEPARATE INSTRUCTIONAL PAC	E	899	767
8254		SHELBY LYMAN CHESS TEACHER	R	40	37
8250		SWORD OF ZEDEK	R	25	24
8249		TIME TRAVELLER	R	25	24
8243		VOCABULARY BUILDING & DICTIONARY	E	150	135

** L&S COMPUTERWARE					
5933		ACEY DEUCY	R	30	21
5932		CROSSWORD MAGIC 2	R	50	37

** LAZER SYSTEMS					
5935		ANIX OPERATING SYSTEM	U	50	37
5934		DOSOURCE 3.3	U	40	32
5936		PASCAL PATCH	U	40	32

** LEARNING COMPANY, THE					
5938		BUMBLE GAMES	E	40	32
5939		BUMBLE PLOT	E	40	32
5941		GERTRUDES PUZZLES	E	45	36
5940		GERTRUDES SECRETS	E	45	36
5937		JUGGLES RAINBOW	E	30	24
5945		MAGIC SPELLS	E	35	28
5944		MOPTOWN HOTEL	E	40	32
5943		MOPTOWN PARADE	E	40	32
5942		ROCKYS BOOTS	E	50	40

** LEGEND INDUSTRIES					
CP/M FAST DISK					
		MEMORY MASTER	U	70	56
		SUPER EMULATOR	U	35	28
			U	60	48

** LIGHTNING SOFTWARE					
5949		MASTERTYPE	E	40	32

NMBR	P	ITEM	T	LIST	SELL
** LINK SYSTEMS					
** REQUIRE 64K					
5950		DATAFAX	B	199	140
5956		DATAFAX (80 COL)	B	249	176
5951		DATALINK II (MMII/SM300/1200)	Q	100	79
5955		LINK DISK	B	70	55
5952		LINK INDEX	B	195	150
5954		LINK SAMPLER 1	B	60	48
5953		LINK VIDEO	B	55	44

** LJK ENTERPRISES					
5958		DATA PERFECT-40/80 COLUMN	B	130	115
5959		EDIT 6502	U	100	74
5957		LETTER PERFECT (MMII OPTIONAL)	B	150	106

** LOGIC INDUSTRIES					
5960		PAYLESS TAX 2	B	150	106

** LOTUS DEVELOPMENT					
** LOTUS FONTS REQUIRE E.B.S.					
5962		ALPHABYTE FONT	B	25	19
5963		ALPHABYTES DECORATIVE FONT	B	25	19
5961		EXECUTIVE BRIEFING SYSTEM-EBS	B	199	141
5964		LOTUS ALPHABETS-COLOR FONTS	B	25	19

** LOVELLS					
5965		CHAT (MMII)	Q	40	37

** M&R ENTERPRISES					
5968		SUP'R FILER		95	76
5967		SUP'R LEDGER (REQ 80COL CARD)		295	224
5966		SUPER CALC		295	224

** MAD WEST SOFTWARE					
5970		AMPERDUMP		30	22
5969		AMPERGRAPH		30	22

** MCGRAW HILL *					
5975		ARCHEDLOGY SEARCH		180	
5974		COMMUNITY SEARCH		180	
5973		ENERGY SEARCH		180	
5971		GEOGRAPHY SEARCH		180	
5972		GEOLOGY SEARCH		180	

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# SOFTWARE-APPLE

NMBR P ITEM T LIST SELL

## \*\* MICRO POWER & LIGHT

5986	A MEMORY MYTH	20	19
5984	ADVERTISING TECHNIQUES	25	24
5987	CIRCULATION SYSTEM	30	28
5985	CIRCULATION-ORGANS	30	28
6006	COMMAS	30	28
5995	DIPT	35	33
6007	FACTORING	35	33
6000	GOING TOGETHER-STATISTICS	30	28
6005	GRADE BOOK-TEACHER	40	37
5996	ICAN	30	28
5990	LIBRARY SKILLS	25	24
5982	MAP READING	20	19
6002	NORMAL DEVIATIONS-STATISTICS	30	28
5993	OFF CENTER	30	28
6001	OFF LINE-STATISTICS	30	28
5983	ON THE AVERAGE	30	28
5998	PROOFS & PROPERTIES-GEOMETRY	30	28
5989	PYTHAGOREAN PROOFS	30	28
5994	REPRODUCTION ORGANS	30	28
5999	REPRODUCTION PROCESS	30	28
5992	RIEMANN INTEGRAL	30	28
5997	SCIENTIFIC MEASUREMENTS	25	24
5991	SCIENTIFIC METHOD	20	19
5981	SENTENCES	25	24
5988	SIMPLE MACHINES	30	28
5980	SPELLING RULES	30	28
6008	THE ADAPTABLE SKELETON-TEACHER	35	33
6009	THE ELECTRONIC TOOL	35	33
6010	THE STATISTICS PAC-6 DISKS	275	212
5979	WHATS THE SCORE	30	28
6004	WORD PREP ADVANCED	30	28
6003	WORD PREP BASIC	25	24

## \*\* MICROCOM

6012	MICRO/COURIER (MMII)	150	106
6013	MICRO/TELEGRAM (MMII)	150	110
6011	MICRO/TERMINAL (MMII/SM/APL CAT)	85	61

## \*\* MICRO DISCOVERY/FOKOS

5977	ALIEN AMBUSH	25	19
5978	OUTWORLD	25	19

## \*\* MICRO INFORMATION SYSTEMS \*\* REQUIRE CP/M CBASIC 2.38

6015	ESQ-1-LEGAL TIME & BILLING	2000	1190
6014	MAGIC QUILL-BKPG & ACCTG	2000	1190
6016	PROMOT-PRO TIME & BILLING	2000	1190
6018	SCHEDULER-SCHEDULING & CONTROL	995	611
6017	TAXEXEC-INDIV TAX RETURN	995	611

## \*\* MICRO LAB

6020	ASSET MANAGER	200	154
6040	CROWN OF ARTHAIN	35	28
6022	DATA FACTORY 5.0	300	231
6026	DATA FACTORY-MINI	150	115
6043	DEATH IN THE CARIBBEAN	35	28
6044	DINO EGGS	40	32
6021	DOGFIGHT 2	30	24
6023	ENGLISH SAT 1	30	24
6045	HIGH RISE	35	28
6024	INVOICE FACTORY	200	154
6037	JIGSAW	35	28
6025	LEARNING SYSTEM, THE	75	59
6041	MADVENTURE	25	20
6031	MERGER, THE (REQ DF & IF)	50	40
6038	MINER 2049ER	40	32
6036	MINGS CHALLENGE	35	28
6027	PAINTER POWER	40	32
6039	PALACE IN THUNDERLAND	25	20
6042	PAYROLL MANAGER	300	231
6028	PEEPING TOM	35	28
6029	ROACH HOTEL	35	28
6030	TAX MANAGER	180	138
6032	US CONSTITUTION TUTOR	30	24
6033	VISIBLEND-MERGE VC FILES	50	40
6034	VISIFACTORY-MERGE VC/DF FILES	75	59
6035	WALL STREETER	300	231

## \*\* MICRO SPARC

### \*\*\* ALL REQUIRE 64K

6048	AMP-AMPER MEMORY	30	24
6046	AMPERSOFT	50	40
6047	DIRECTORY MASTER	30	24
6052	GLOBAL LINE EDITOR-BALE	50	40
6050	LEXICOM-TRANSFER WP FILES	40	32
6053	PROOF	50	40
6051	TELETEXT (MMII)	80	63
6049	VIP II-VISICALC PATCH	30	24

## \*\* MICROCOMPUTER WORKSHOPS

6060	ADDING FRACTIONS	25	20
6056	ADDITION WITH CARRY	25	20
6065	CONSONANT-VOWEL-CONSONANT	25	20
6058	DIGIT MULTIPLICATION, 1 2 3	25	20
6054	ENGLISH ACHIEVEMENT I-V EACH	40	32
6055	ENGLISH ACHIEVEMENT I-V SET	175	135
6062	EQUATIONS	25	20
6068	FRENCH ACHIEVEMENT I	40	32
6075	FRENCH ACHIEVEMENT II-AVAL SEP	50	40
6067	I LOVE AMERICA SERIES	100	78
6059	LONG DIVISION	25	20
6071	MEDDLE PRUF	60	48
6066	MIND STRETCHER SERIES	125	97
6061	MULTIPLYING FRACTIONS	25	20
6064	ORDER OF OPERATIONS	25	20
6063	SOLVING QUADRATIC EQUATIONS	25	20
6074	SORTING TECHNIQUES I	25	20
6069	SPANISH ACHIEVEMENT I SPECIAL	40	32
6070	SPANISH ACHIEVEMENT I-SEP I	50	40
6076	SPANISH ACHIEVEMENT II-AVAL SEP	50	40
6057	SUBTRACTION	25	20
6073	SUBTRACTING MIXED FRACTIONS	25	20
6072	WRITING CHEMICAL FORMULAS	25	20

Why do you need  
Function keys?

Shouldn't they all  
Work???

# SOFTWARE-APPLE

NMBR P ITEM LIST SELL

## \*\* MICROWARE

6152	GENERAL ACCOUNTING SYSTEM		
6151	MANUFACTURING MANAGEMENT SYSTEM 2995	1783	

## \*\* MICRO-WARE DISTRIBUTORS

6162	FONT LOADER	40	24
6159	GRAPH FIT HIRES	28	21
6157	MR LISTER *DEMO + MANUAL	14	14
6156	MR LISTER-MAIL LIST	139	91
6158	ROBOT TANK 3D	35	24
6160	STOCK MOMENTUM	525	344
6161	STOCK MOMENTUM *DEMO	39	39
6153	SUPER PIX-EPSON	25	17
6155	SUPER PIX-NEC8023/PROWRITER	25	17
6154	SUPER PIX-OKIDATA	25	17

## \*\* MICRO-COM

6163	MICRO-COM BBS (MM II)	125	
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## \*\* MIND SYSTEMS

6164	AIRSIM-1 FLIGHT SIMULATOR	40	32
6165	SPITFIRE SIMULATOR	40	32

## \*\* MUSE SOFTWARE

6171	ABM	25	20
6174	ADDRESS BOOK, THE	50	40
6180	APPILOT EDU DISK	100	78
6170	BEST OF MUSE, THE	40	32
6172	CASTLE WOLFENSTEIN	30	24
6182	CAVERNS OF FREITAG	30	24
6168	CUBE SOLUTION, THE	25	20
6176	DATA PLOT	60	48
6179	ELEMENTARY MATH EDU-DISK	40	32
6173	FIREFLY	25	20
6175	FORM LETTER (REQ SUPER/TEXT)	100	78
6167	FRAZZLE	25	20
6184	INTERNATIONAL GRAND PRIX	30	24
6181	KNOW YOUR APPLE	35	28
6166	ROBOTWARS	40	32
6183	SUPER/TEXT HOME OFFICE	99	77
6169	THREE MILE ISLAND	40	32
6177	U DRAW IT	40	32
6178	VOICE, THE	40	32

## \*\* MYCROFT LABS

### \*\*\* ALL REQUIRE CP/M

7876	BYE	100	78
7878	GRAPHPAK (PLOTTER)	200	154
7879	MADS W/IDLIB	300	231
7877	MITE & BYE	200	154
6185	MITE (MMII & CP/M)	150	115
7880	STDBIOS 2.0	100	78

## \*\* NEW VISION

6186	EARTH DEFENDER	30	22
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## \*\* NEXA

6187	CYBERNATION (64K)	40	32
6188	DELTA SQUADRON	40	32

## \*\* NIKROM TECHNICAL PRODUCTS

6190	MASTER DIAGNOSTICS	55	44
6191	MASTER DIAGNOSTICS PLUS	75	62
6192	NOTEBOOK	55	44

NMBR P ITEM LIST SELL

## \*\* MICROPRO INTERNATIONAL

### \*\*\* ALL REQUIRE CP/M

6109	CALCSTAR (8" CP/M)	145	102
6082	CALCSTAR 1.45 (64K)	145	103
6093	DATA/CALC/SUPERSORT PAC	495	286
6110	DASTAR (8" CP/M)	295	208
6083	DASTAR 1.4	295	205
6111	INFOSTAR (8" CP/M)	495	340
6103	INFOSTAR 1.0	395	272
6098	INFOSTAR 1.0 W/APPLICARD	495	371
6112	MAILMERGE (8" CP/M)	250	176
6100	MAILMERGE 3.3	195	138
6096	MICROPRO *DEMOS	33	
6113	REPORTSTAR (8" CP/M)	350	247
6080	REPORTSTAR 1.0	350	247
6114	SPELLSTAR (8" CP/M)	250	176
6101	SPELLSTAR 3.3	195	138
6107	STAR INDEX (8" CP/M)	195	138
6102	STARINDEX 1.0	195	138
6115	SUPERSORT (8" CP/M)	250	176
6078	SUPERSORT 1.6	250	173
6116	WORD & MAILMERGE (8" CP/M)	645	443
6117	WORD & SPELLSTAR (8" CP/M)	695	478
6105	WORD/MAIL 3.3	545	375
6104	WORD/MAIL/SPELL/INDEX 3.3	695	478
6106	WORD/SPELL 3.3	595	409
6118	WORDSTAR (8" CP/M)	495	309
6099	WORDSTAR 3.3	395	272
6097	WORDSTAR 3.3 W/APPLICARD	495	371
6088	WORDSTAR CUSTOM NOTES	50	37
6119	WORDSTAR CUSTOM NOTES (8" CP/M)	50	37
6108	WORDSTAR PRO (8" CP/M)	695	478
6095	WORDSTAR UPDATE	85	66
6094	WORDSTAR-APPLE DOS	495	338
6092	WORDSTAR-EXTERNAL TERMINAL	495	340
6089	WORDSTAR-FRENCH	495	340
6091	WORDSTAR-GERMAN	495	340
6090	WORDSTAR-SPANISH	495	340
6104	STAR BURST	138	

## \*\* MICROSEEDS

6221	DARK	35	28
6120	MON+ (64K)	40	32
6222	MON+ ON ROM CHIP	50	40

## \*\* MICROSOFT PRODUCTS

6124	ADVENTURE	30	22
6128	ALDS (CP/M)	125	90
6134	APPLESOFT COMPILER-TASC	175	124
6140	BASIC COMPILER (8" CP/M)	395	279
6129	BASIC COMPILER (CP/M)	395	273
6141	BASIC INTERPRETER (8" CP/M)	350	248
6142	COBOL-80 (8" CP/M)	750	511
6132	COBOL-80 (CP/M & 2 DISK DRIVES)	750	511
6143	EDIT-80 (8" CP/M)	120	86
6144	FORTRAN-80 (8" CP/M)	500	345
6127	FORTRAN-80 COMPILER (CP/M)	195	138
6145	MACRO ASSEMBLER (8" CP/M)	200	142
6148	MULISP/MUSTAR (8" CP/M)	200	142
6131	MULISP/MUSTAR-80 (CP/M)	200	142
6146	MULTIPLAN (8" CP/M)	275	195
6136	MULTIPLAN (CP/M & 64K)	275	195
6135	MULTIPLAN (DOS 3.3 & 64K)	275	195
6139	MULTITool BUDGET ANALYSIS	150	115
6138	MULTITool FINANCIAL STATEMENT	100	78
6149	MUMATH/MUSIMP (8" CP/M)	250	177
6130	MUMATH/MUSIMP (CP/M)	250	177
6137	MUMATH/MUSIMP (DOS 3.3)	250	177
6125	OLYMPIC DECATHLON	30	22
6133	SORT FACILITY (CP/M)	195	138
6147	SORT FACILITY (8" CP/M)	195	138
6126	TIME MANAGER	150	112
6123	TYPING TUTOR II	25	19

## \*\* MICROTIX INDUSTRIES

6150	PI6 DOS ENHANCEMENT PKG	20	15
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# SOFTWARE-APPLE

NMBR P ITEM LIST SELL

**\*\* NORELL DATA SYSTEMS**

6193 VISUALIZE DOCUMENTATION AID 100 78

**\*\* NOVA SOFTWARE**

6197 BIG RACE, THE 20 18  
6195 FINGER PAINTING (RED JOYSTICK) 35 31  
6196 TALKING ALPHABET, THE 25 23

**\*\* NOVATION**  
**\*\* SEE HARDWARE/MODEM**

**\*\* ODESTA**

6199 CHECKERS 50 35  
6198 CHESS 70 51  
6200 ODIN 50 35

**\*\* OKIDATA**

6201 OKIGRAPH II 65 59

**\*\* OMEGA MICROWARE**

6214 CHART TRADER + PLUS 199 153  
6209 CHART TRADER PAC 149 124  
6206 CONSOLIDATOR (VISICALC) 50 40  
6211 FINANCIAL TRADER PAC 499 405  
6203 INSPECTOR DISK, THE 60 52  
6213 INVESTORS TOOLKIT \*DEMO 8  
6202 LOCKSMITH 100 78  
6205 MANAGER, THE 35 31  
6210 MARKET ANALYST PAC 249 208  
6208 NIGHT FALLS 30 24  
6212 PROFESSIONAL TRADER PAC 699 561  
6207 TRANSPORTER (VISICALC/STARFIRE) 50 43  
6204 WATSON DISK 50 40

**\*\* OPTIMIZED SYSTEMS SOFTWARE**

6215 SPEEDREAD PLUS 60

**\*\* OVERBEEK ENTERPRISES**

6218 DISK INSPECTOR (CP/M) 30  
6217 MENU-PLUS 2.02 (CP/M) 30  
6216 MICRO-WYL EDITOR (280 CP/M) 30

**\*\* PAR SOFTWARE ★**

6220 STAT-SYSTEMS 295

**\*\* PASSPORT DESIGNS**  
**\*\* SEE HARDWARE SECTION**

6222 MUSIC TUTOR 195 168  
6223 NOTES & KEYS 195 168  
6224 NOTEWRIITER 99 86  
6225 TURBO-TRAKS 250 215

**\*\* PAY LESS TAX**

6221 PAY LESS TAX 150 106

**\*\* PBL**

6226 PERSONAL INVESTOR (MMII) 145 112

NMBR P ITEM LIST SELL

**\*\* PEACHTREE SOFTWARE**  
**\*\*\* ALL REQUIRES CP/M & 64K**

6251 BLACKS LAW DICTIONARY (RED SP) 250 176  
6229 S40 ACCOUNTS PAYABLE 265 187  
6228 S40 ACCOUNTS RECEIVABLE 265 187  
6227 S40 GENERAL LEDGER 265 187  
6230 S40 INVENTORY CONTROL 265 187  
6231 S40 PAYROLL 265 187  
6232 S40 PEACHPAC-GL/AR/AP 395 253  
6235 S80 ACCOUNTS PAYABLE 265 187  
6234 S80 ACCOUNTS RECEIVABLE 265 187  
6233 S80 GENERAL LEDGER 265 187  
6236 S80 INVENTORY CONTROL (VIDEOTRM) 265 187  
6237 S80 PEACHPAC-GL/AR/AP (VIDEOTRM) 395 253  
6243 S9 CALENDER MANAGER 375 240  
6241 S9 MAILING LIST MANAGER 250 160  
6238 S9 PEACHCALC 150 106  
6253 S9 PEACHTEXT 250 176  
6245 S9 PEACHTEXT (SMARTER) 250 160  
6246 S9 PEACHTEXT (SUP'R TERM) 250 160  
6244 S9 PEACHTEXT (VIDEOTERM) 250 160  
6250 S9 PEACHTEXT/SP/ML 395 272  
6248 S9 PEACHTEXT/SP/ML (FULVIEW) 500 313  
6247 S9 PEACHTEXT/SP/ML (SMARTER) 500 313  
6249 S9 PEACHTEXT/SP/ML (VIDEOTERM) 500 313  
6240 S9 SPELLING PROOFREADER 150 97  
6239 S9 TELECOMMUNICATIONS 150 106  
6242 S9 THESAURUS 200 128  
6252 STEDMANS MEDICAL DICT (REQ SP) 250 176

**\*\* PEACHTREE SOFTWARE**  
**\*\* REQ 8" CP/M**

6267 S10 JOB COSTING 750 469  
6254 S4 ACCOUNTS PAYABLE 600 375  
6255 S4 ACCOUNTS RECEIVABLE 600 375  
6256 S4 CALENDAR MANAGER 375 240  
6257 S4 GENERAL LEDGER 600 375  
6258 S4 PEACHPAC GL/AR/AP 395 253  
6265 S6 CLIENT POSTING & ACCOUNTS 750 469  
6266 S6 PASSIVE PAYROLL SERVICE 600 375  
6259 S8 ACCOUNTS PAYABLE 750 469  
6260 S8 ACCOUNTS RECEIVABLE 750 469  
6261 S8 GENERAL LEDGER 750 469  
6262 S8 INVENTORY MANAGEMENT 750 469  
6263 S8 PEACHPAY 750 469  
6264 S8 SALES INVOICING 750 469  
6268 S9 MAILING LIST MANAGER 250 160  
6269 S9 PEACHCALC 150 96  
6270 S9 PEACHTEXT/SP/ML 395 253  
6271 S9 SPELLING PROOFREADER 150 96  
6272 S9 TELECOMMUNICATIONS 150 96  
6273 S9 THESAURUS SERIES 200 128

**\*\* PEARLSOFT**

6274 PERSONAL PEARL (CP/M 2.2 52K) 295 228  
(80 COL CARD)

**\*\* PENGUIN SOFTWARE**

6282 ADDL FONTS & CHAR SETS (GS II) 20 15  
6283 CRIME WAVE 20 15  
6287 GRAPHICS MAGICIAN (GRPH TABLT) 70 55  
6276 GRAPHICS MAGICIAN (PDL/JOYSTK) 60 44  
6284 GRAPHICS SYSTEM II (GRPH TABLT) 120 93  
6280 GRAPHICS SYSTEM II (PDL/JOYSTK) 70 51  
6286 GRPH SYS/SPECL EFF (GRPH TABLT) 190 146  
6278 PIE-MAN 20 15  
6285 SPECIAL EFFECTS (GRPH TABLT) 70 55  
6281 SPECIAL EFFECTS (PDL/JOYSTICK) 40 29  
6275 SPY'S DEMISE 20 15  
6279 THUNDERBOMBS 20 15  
6277 TRANSYLVANIA 20 15

NMBR P ITEM LIST SELL

**\*\* PERFECT SOFTWARE**  
**\*\*\* ALL REQUIRE CP/M & 80 COL**

6291 PERFECT CALC 295 126  
6294 PERFECT CALC (8" CP/M) 295 151  
6290 PERFECT FILER 595 254  
6293 PERFECT FILER & CALC 750 313  
6296 PERFECT FILER & CALC (8" CP/M) 750 375  
6295 PERFECT FILER (8" CP/M) 595 298  
6289 PERFECT SPELLER 295 126  
6297 PERFECT SPELLER (8" CP/M) 295 151  
6288 PERFECT WRITER 495 212  
6292 PERFECT WRITER & SPELLER 695 290  
6299 PERFECT WRITER & SPELLER (8") 695 348  
6298 PERFECT WRITER (8" CP/M) 495 249

**\*\* PHOENIX PERFORMANCE SYSTEMS ★**

6300 THE AUTHOR 195

**\*\* PHOENIX SOFTWARE**

6301 ADVENTURE IN TIME 30 22  
6302 BANNER MAGIC 25 19  
6305 BIRTH OF THE PHOENIX, THE 22 16  
6303 FORMS FOUNDRY 150 106  
6306 QUEEN OF PHOBOS 35 26  
6304 SHERWOOD FOREST 35 26  
6307 ZOOM GRAFIX 50 37

**\*\* PICCADILLY SOFTWARE**

6308 FALCONS 30 22  
6312 RIBBIT 30 24  
6311 STARBLASTER 30 22  
6313 SUCCESSION 30 22  
6310 SUICIDE 30 22  
6309 WARP DESTROYER 30 22

**\*\* PROFORMA SOFTWARE**

6314 TAX BREAK ANNUAL 130 93  
6315 TAX BREAK PLANNER 180 126

**\*\* PROGRAM DESIGN**

6331 ANALOGIES 24 24  
6317 ASTRO QUTES 24 19  
6323 CODE BREAKER 24 24  
6325 MEMORY BUILDER CONCENTRATION 24 19  
6326 MINICROSSWORD 24 24  
6316 NEW STEP BY STEP 80 63  
6335 NUMBER SERIES 24 24  
6338 PREPARING FOR THE SAT 120 93  
6318 PRESCHOOL IQ BUILDER 24 19  
6320 PRESCHOOL IQ BUILDER 1 24 24  
6322 PRESCHOOL IQ BUILDER 1 & 2 45 45  
6321 PRESCHOOL IQ BUILDER 2 24 24  
6336 QUANTITATIVE COMPARISONS 27 22  
6324 READING COMPREHENSION 24 19  
6337 SPELLING BUILDER 27 27  
6319 STEP BY STEP TWO 90 71  
6339 STORY BUILDER/WORD MASTER 24 19  
6330 TIME BOMB WORD GAME 24 24  
6334 VOCABULARY BUILDER 1 & 2 45 45  
6332 VOCABULARY BUILDER ONE 24 24  
6333 VOCABULARY BUILDER TWO 24 24  
6327 WORD SEARCH:FRENCH 24 24  
6328 WORD SEARCH:GEOGRAPHY 24 24  
6329 WORD SEARCH:SPANISH 24 24

**\*\* PROMPT DDC**

6340 MANUAL MAKER (CP/M) 245 191

**\*\* PROXIMITY DEVICES ★**

6341 WORD CHALLENGE 40

# SOFTWARE-APPLE

NMBR P ITEM LIST SELL

**\*\* QUALITY SOFTWARE**

6344 ALI BABBA & THE FORTY THEIVES 33 27  
6350 ASTROAPPLE 20 16  
6343 BAG OF TRICKS 40 32  
6349 BATTLESHIP COMMANDER 20 16  
6342 BENEATH APPLE MANDR 30 24  
6347 CROSS-REFERENCE 25 20  
6346 FASTGAMMON 25 20  
6348 FRACAS 25 20  
6353 GBS-DB APPL DEV PGM (CP/M) 650 488  
6345 METEROLDS IN SPACE  
6352 PRO POKER 40 32  
6351 QS REVERSI 30 24

**\*\* QUINSEPT**

6355 FAMILY ROOTS 185 155  
6354 LINEAGES 99 72

**\*\* RAINBOW COMPUTING ★**

6356 BAT-STAT 50  
6357 BOWLING DATA SYSTEM 2.0 150  
6358 DISK FIXER 30  
6359 FODR MANS GRAPHIC TABLET 50  
6360 POT O GOLD PLUS 40  
6361 RAINBOW GRAPHICS 30  
6362 SKRAM 20  
6363 SOME COMMON BASIC PROGRAMS 40  
6364 STATISTICS WITH DAISY 80  
6365 SUPER SOUND 3.3 20

**\*\* REALTY SOFTWARE ★**

6374 APR LOAN ANALYSIS 50  
6371 CONSTRUCTION COST/PROFIT 50  
6372 DEPRECIATION/ACRS 50  
6370 HOME PURCHASE 50  
6377 INCOME PROPERTY ANALYSIS 50  
6369 LOAN AMORTIZATION SCHEDULE 50  
6373 LOAN SALES/PURCHASE 50  
6375 LOAN WRAP ANALYSIS 50  
6367 PROPERTY LISTING & COMPARABLES 325  
6366 PROPERTY MANAGEMENT 375  
6368 PROPERTY SALES 50  
6376 TAX DEFERRED EXCHANGE ANALYSIS 50

**\*\* RED WING BUSINESS SYSTEMS**

NO MAIL ORDER!

**\*\* REVEAL SOFTWARE**

6378 PORTFOLIO & CLIENT MANAGEMENT 1250 1054  
6379 SOFTWARE WARRANTY 1 YEAR 290 290

**\*\* ROCKROY**

6382 CONGLOMERATES COLLIDE 40 32  
6383 MAX COMMAND 40 32

**\*\* ROCKY MOUNTAIN SOFTWARE**

6384 TELETRANSFER (MMII) 40

**\*\* ROKLAN**

6385 GORF 40 32  
6387 PICTURE PARTS 40 32  
6388 SPACE JOURNEY 40 32  
6386 WIZARD OF WOR 40 32



## SOFTWARE-APPLE

NMBR P ITEM LIST SELL

## \*\* RTR SOFTWARE ★

6391	DB UTIL (REQ DOWJONES MKT ANAL)	90	
6389	MARKET CHARTER	130	
6390	MARKET CHARTER II	250	

## \*\* SABER SOFTWARE

6392	DEMONS FORGE	30	22
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## \*\* SATORI SOFTWARE

6393	BULK MAILER	125	97
6394	BULK MAILER-HARD DISK VERSION	350	263
6395	INVENTORY MANAGER	150	112
6396	LEGAL BILLING	350	263

## \*\* SAVANT SOFTWARE

6397	CODE PRACTICE	30	24
6397	DIETCALC	30	24
6398	OPTIONCALC	65	52

## \*\* SCHOLASTIC WIZWARE

6400	MICROZINE	40	29
6401	SQUARE PAIRS	40	29
6402	TURTLE TRACKS	40	29

## \*\* SCIENTIFIC SOFTWARE PRODUCTS

6403	AMPERWARE-APPLESOFT ENHANCEMENT	50	40
6404	BIBLIOTEX	195	150

## \*\* SELECT INFORMATION SYSTEMS

## \*\*\* ALL REQUIRE CP/M

6405	SELECT WORD PROCESSING SYSTEM	595	372
6406	TEACH/M	75	54

## \*\* SENSIBLE SOFTWARE

6413	ADPT	20	15
6412	APLUS-STRUCTURED BASIC	40	29
6407	BACK IT UP	60	44
6419	BEST-APPLESOFT PGM OPTIMIZER	40	29
6424	BLACKS LEGAL DICTIONARY	100	78
6425	BOOK ENDS	125	89
6421	BUG-DEBUG ASSEMBLY LANGUAGE	50	40
6418	BUILD USING	30	22
6422	CYCLOTRON	30	24
6411	DISK ORGANIZER 2	30	22
6410	DISK RECOVERY "SCANNER"	30	22
6416	DOS PLUS	25	19
6417	EDIT SOFT	40	29
6423	IMAGE PRINTER II	50	37
6414	MULTIDISK CATALOG III	25	19
6415	ORIGINAL QUICK LOADER, THE	25	19
6409	FASCAL LOWER CASE	25	19
6420	QUADRANT 6112	30	22
6427	REPORT CARD	60	44
6426	SENSIBLE SPELLER-UNIVERSAL	125	89
6428	SPELLER IV	125	89
6429	STEADMAN'S MEDICAL DICTIONARY	100	78
6408	SUPER DISK COPY III	35	26

## \*\* SENTIENT SOFTWARE

6432	CONGO	35	26
6431	CYBORG	33	26
6433	GOLDRUSH	35	26
6430	OO-TOPOS	33	24

## \*\* SIERRA ON LINE

6443	ADV 0-MISSION ASTEROID	20	15
6445	ADV 1-MYSTERY HOUSE	25	19
6456	ADV 2-WIZARD & THE PRINCESS	33	24
6435	ADV 3-CRANSTON MANOR	35	26
6452	ADV 4-ULYSSES & GOLDEN FLEECE	35	26
6451	ADV 5-TIME ZONE	100	72
6473	APPLE CIDER SPIDER	30	24
6467	ARTIST, THE	80	58
6468	BOP-A-BET	28	21
6434	CANNONBALL BLITZ	35	26
6436	CROSSFIRE	30	22
6458	DARK CRYSTAL	35	26
6463	DIC-TIO-NARY, THE	100	72
6469	DRAGONS KEEP	30	22
6461	E.P.F. IV	80	58
6438	FOOTBALL-HIRES	40	29
6437	FROGGER	35	26
6462	GENERAL MANAGER, THE	230	162
6453	JAWBREAKER	30	22
6440	LAFF PAK	35	26
6471	LEARNING WITH LEEPER	35	26
6466	LISA 2.5	80	56
6441	LUNAR LEEPER	30	22
6442	MARAUDER	35	26
6465	MEMORY MANAGEMENT 2	50	37
6444	MISSILE DEFENSE	30	22
6454	MOUSKATTACK	35	26
6446	PEGASUS II	30	22
6447	PEST PATROL	30	22
6448	SABOTAGE	25	19
6472	SAMMY LIGHTFOOT	30	22
6459	SCREEN WRITER II	130	93
6460	SCREEN WRITER PRO (80 COL)	200	141
6439	SOCCER-HIRES	30	22
6449	SOFTPORE ADVENTURE	30	22
6464	SPEED ASM	40	29
6450	THRESHOLD	40	29
6470	TROLLS TALE	30	22
6455	ULTIMA II	60	44
6457	WALL WAR	40	29

## \*\* SIERRA SOFTWARE

6474	RETROBALL	30	24
6475	SPACE ADVENTURE	30	24

## \*\* SILICON VALLEY SYSTEMS

6483	APPLE SOURCE	40	29
6485	COLLECTOR, THE	25	19
6479	EZ LEARNER	40	29
6484	FINAL ANALYSIS	275	194
6486	LANCASTER	30	22
6477	LIST HANDLER	90	66
6478	RAPID READER	40	29
6481	SNAPPER	33	22
6482	TODDLERS TUTOR	25	19
6480	TURBOCHARGER	30	22
6476	WORD HANDLER	199	147

## \*\* SIR TECH SOFTWARE

6488	GALACTIC ATTACK	30	24
6492	POLICE ARTIST	35	28
6490	STAR MAZE	35	28
6487	WIZARDRY 1-PROVING GROUNDS	50	40
6489	WIZARDRY 2-KNIGHT OF DIAMONDS	35	28
6491	WIZARDRY 3-LEGACY OF LLYLGARNY	40	32
6493	WIZPRINT	25	20

## \*\* SIRIUS SOFTWARE

6494	AUDEX	30	24
6495	AUTOBAHN	30	24
6496	BANDITS	35	28
6497	BEER RUN	30	24
6498	BLADE OF BLACKPOOLE, THE	40	32
6499	BORG	30	24
6500	BOTH BARRELS	25	19
6535	BUZZARD EAT	35	28
6502	COMPUTER FOOTBALL	30	24
6501	COPTS & ROBBERS	35	28
6533	CRITICAL MASS	40	32
6503	CYBER STRIKE	40	29
6504	CYCLODS	30	24
6505	DARK FOREST	30	24
6506	EPOCH	35	28
6507	ESCAPE FROM RUNGISTAN	30	24
6508	EZ DRAW 3.3	50	40
6509	FLIP OUT	30	24
6510	FLY WARS	30	24
6511	FREE FALL	30	24
6512	GAMMA GOBLINS	30	24
6513	GORGON	40	32
6536	GURDS IN SPACE	35	28
6514	HADRON	35	28
6515	JELLY FISH	30	24
6516	KABUL SPY	35	28
6517	LEMMINGS	30	24
6518	MINOTAUR	35	28
6519	ORBITRON	30	24
6520	OUTPOST	30	24
6521	PASCAL GRAPHICS EDITOR	100	79
6522	PHANTOMS FIVE	30	24
6534	PLASMANIA	35	28
6523	PULSAR 2	30	24
6524	REFTON	40	32
6525	SNAKE BYTE	30	24
6526	SNEAKERS	30	24
6527	SPACE EGGS	30	24
6528	STAR CRUIER	25	19
6530	TWERPS	30	24
6529	TYPE ATTACK	40	32
6531	WAVY NAVY	35	28
6532	WAYOUT	40	32

## \*\* SMARTWARE ★

6537	GRAF PAK-HIRES DUMP-NX70/80	30	
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## \*\* SMITH MICRO SOFTWARE

6538	STOCK PORTFOLIO SYS (MMII OPT)	185	131
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## \*\* SOF/SYS

6543	DISK RECOVERY SYSTEM-DRS	100	78
6539	EXECUTIVE SECRETARY (MMI OPT)	250	192
6541	EXECUTIVE SECRETARY-HARD DISK	300	231
6540	EXECUTIVE SPELLER	75	59
	LOWER CASE ADAPTER	40	29
6544	PERSONAL SECRETARY	100	78
6542	WRITE PROTECT CARD + MANUAL	75	59

## \*\* SOFT IMAGES

6545	BLACK JACK STRATEGY	70	51
6546	PANDAMONIUM	40	29
6547	SINGLES NIGHT AT MOLLYS	30	22

## \*\* SOFTCORP INTERNATIONAL

6552	SS1 BASIC BUSINESS STATISTICS	250	208
6548	SS2 REGRESSION & CORRELATION		
6549	SS3 ANALYSIS OF VARIANCE		
6550	SS4 FORECASTING		
6551	SS5 GRAPHICS		

## SOFTWARE-APPLE

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## \*\* SOFTECH MICROSYSTEMS

6554	BASIC COMPILER & RUNTIME PAC	225	173
6556	SOFTTEACH	125	97
6553	UCSD P-SYSTEM SET (64K)	625	469
6555	XENOFIL	50	40

## \*\* SOFTRONICS

6557	SOFTERM (MMII/SM300/1200)	150	115
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## \*\* SOFTSTALKER

6558	SIMPLE+DOS	50	43
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## \*\* SOFTWARE BY M

6559	TOTAL LEARNING SYSTEM	129	84
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## \*\* SOFTWARE CONNECTIONS ★

6561	CLASSROOM MONITOR-HARD DISK VERS		
6560	CLASSROOM MONITOR		
6562	MAIL MONITOR		
6563	TIMEKEEPER		

## \*\* SOFTWARE DIMENSIONS

6579	AP CPM-1 MODULE	645	369
6572	AP CPM-2 MODULES	1290	728
6573	AP CPM-3 MODULES	1935	1066
6574	AP CPM-4 MODULES	2580	1405
6575	AP CPM-5 MODULES	3225	1756
6576	AP CPM-6 MODULES	3870	2107
6577	AP CPM-7 MODULES	4515	2429
6578	AP CPM-8 MODULES	5160	2776
6565	AP CPM-ACCOUNTS PAYABLE		
6566	AP CPM-ACCOUNTS RECEIVABLE		
6564	AP CPM-GENERAL LEDGER	645	369
6569	AP CPM-INVENTORY		
6571	AP CPM-PAYROLL		
6570	AP CPM-POINT OF SALE		
6567	AP CPM-PURCHASE ORDER ENTRY		
6568	AP CPM-SALES ORDER ENTRY		
6585	AP II-1 MODULE-GL	395	269
6586	AP II-2 MODULES	725	438
6587	AP II-3 MODULES-GL/AR/AP/IN	995	586
6588	AP II-4 MODULES-GL/AR/AP/IN	1250	732
6581	AP II-ACCOUNTS PAYABLE		
6582	AP II-ACCOUNTS RECEIVABLE		
6593	AP II-DATA PLUS	99	66
6580	AP II-GENERAL LEDGER	395	269
6592	AP II-GENERAL LEDGER PLUS	190	122
6584	AP II-INVENTORY		
6595	AP II-INVOICES PLUS	295	186
6594	AP II-LABELS PLUS	99	59
6583	AP II-PAYROLL		
6589	AP II-PAYROLL-ADD ON	375	250
6590	AP II-STAND ALONE INVENTORY	395	272
6591	AP II-STAND ALONE PAYROLL	400	263

## \*\* SOFTWARE EMPORIUM

6596	INFERNO	30	24
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## \*\* SOFTWARE PRODUCTIONS

6598	ALPHABET BEASTS	30	22
6597	MICRO MOTHER GOOSE	40	29

## \*\* SOFTWARE PUBLISHING

6602	PFS *DEMO		6
6599	PFS: FILING SYSTEM	125	89
6601	PFS: GRAPH	125	89
6600	PFS: REPORT	125	89



## SOFTWARE-APPLE

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## \*\* SOFTWARE RESOURCES \*

6604 OPTION ANALYSIS SYSTEM-D.A.SYS 395  
6603 SMART (MMII/SM300/1200) 1950

## \*\* SOFTWARE TECHNOLOGY-STC

6607 APARTMENT MANAGER 395 296  
6610 CREATOR, THE 200 154  
6609 IFO-DATA BASE MANAGEMENT 200 154  
6608 INVENTORY 275 212  
6606 LANGUAGE/READING DEVELOPMENT 175 135  
6605 TIME & BILLING, PROFESSIONAL 395 296

## \*\* SOFTWARES

6612 COMM PAC 85 62  
6611 STOCK PAC 110 79

## \*\* SOLID SOFTWARE

6616 COMMERCIAL PROPERTY ANALYSIS 895 556  
6615 COMMERCIAL PROPERTY MANAGEMENT 1495 915  
6614 MEDICAL DATA MANAGEMENT 1495 915  
6613 SALES ENTRY ORDER W/AR & INV 1495 915

## \*\* SOLIDUS INTERNATIONAL

6620 INTEGRITY PLUS-HDWE DIAGNOSTIC 66  
6617 STOCKFILE 679  
6621 STOCKFILE/SELLER/MAKER 1905  
6619 STOCKMAKER 679  
6618 STOCKSELLER 793

## \*\* SOLUTIONS

6623 VIS/BRIDGE/REPORT (VISICALC) 79 73  
6622 VIS/BRIDGE/SORT (VISICALC) 89 81

## \*\* SOPHISTICATED SOFTWARE \*

7885 LABELER, THE 20  
7884 LE MENU 40  
7882 LITTLE BLACK BOOK, THE 100  
7888 MICRO-MASS MAILER 70  
7887 PRINT-A-FILE (REQ ROLL A FILE) 40  
7886 ROLL-A-FILE 30  
7883 SCHEDULER, THE 70

## \*\* SORCIN

## \*\*\* ALL REQUIRE CP/M

6625 SPELLGUARD 195 138  
6635 SPELLGUARD (8" CP/M) 195 138  
6624 SUPERCALC 195 138  
6636 SUPERCALC (8" CP/M) 195 138  
6627 SUPERCALC 2 295 208  
6637 SUPERCALC 2 (8" CP/M) 295 208  
6628 SUPERCHART - TBA  
6629 SUPERDATA - TBA  
6632 SUPERTOOL ACT-ASSEMBLER 175  
6633 SUPERTOOL ACT/COMB 300  
6630 SUPERTOOL PASCAL/M 8080 395  
6631 SUPERTOOL PASCAL/M 8086 495  
6634 SUPERTOOL TRANS B6 175  
6626 SUPERWRITER-SPECIAL THRU JUL 20 295 189

## \*\* SOUTHEASTERN SOFTWARE

6638 DATA CAPTURE 4.0 (MMII/SM300) 65 48  
6640 DATA CAPTURE 4.0-SMARTER 90 65  
6641 DATA CAPTURE 4.0-SUP'R TERM 90 65  
6642 DATA CAPTURE 4.0-SUPERSERIAL 90 71  
6639 DATA CAPTURE 4.0-VIDEOTERM 90 65

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## \*\* SOUTHWEST ED PSYCH SERVICES

6645 MATH MACHINE 80 58  
6646 MATH WARS 40 29  
6647 READING MACHINE 60 44  
6643 SPELLING MACHINE 50 37  
6644 SPELLING SORCERY 30 26

## \*\* SOUTHWESTERN DATA SYSTEMS

6648 ACE 40 31  
6649 ALIEN GAME, THE 35 27  
6673 AMPER CHART 50 37  
6650 AMPERSOFT LIB 1 50 37  
6651 APPLE DOC 40 29  
6652 ASCII EXPRESS II (MMII/SM300) 80 44  
6662 ASCII EXPRESS PRO (MMII/SM300) 130 98  
6655 CORRESPONDENT/LETTER CARRIER 60 46  
6671 DISK LIBRARY 50 40  
6654 DOUBLE TIME PRINTER 100 72  
6656 FINANCIAL MANAGEMENT SYSTEM II 65 50  
6657 LIST MASTER 40 31  
6658 MERLIN 65 50  
6653 MERLIN/MUNCHABUG/ASSEMBLY LINE 120 90  
6659 MUNCH A BUG 50 39  
6660 NORAD 40 31  
6661 ONLINE (MMII) 90 69  
6664 P-TERM PRO (80 COL) (MMII/SM300) 130 98  
6663 PRINTOGRAPHER 50 39  
6667 PROGRAMMERS UTILITY 25 20  
6665 ROGERS EASEL 25 20  
6666 ROUTINE MACHINE 65 48  
6672 SPANISH FOR THE TRAVELER 60 46  
6668 SPEED STAR-APPLESOFT COMPILER 100 72  
6669 Z-TERM (CP/M) (MMII) 100 76  
6670 Z-TERM PRO (CP/M/MS2/MMII/SM300) 150 111

## \*\* SPACE TIME ASSOCIATES

6674 AIR NAVIGATION TRAINER 40 30

## \*\* SPECTRUM SOFTWARE \*

6676 LOGIC DESIGNER & SIMULATOR 250  
6677 MATHEMATICS SERIES 50  
6675 MICRO-CAP 475  
6678 PERSONAL FINANCE MASTER 75  
6680 SSI-ACCOUNTS RECEIVABLE 150  
6679 SSI-GENERAL LEDGER 150

## \*\* SPINNAKER SOFTWARE

6687 CHRISTMAS SAMPLER 30 22  
6685 DELTA DRAWING 50 37  
6681 FACEMAKER 35 27  
6689 HEY DIDDLE DIDDLE 30 22  
6690 IN SEARCH OF AMAZING THING 40 29  
6688 KINDER COMP 30 22  
6686 RHYMES & RIDDLES 30 22  
6682 SNOOPER TROOPS 1-GHOST 45 35  
6683 SNOOPER TROOPS 2-DOLPHIN 45 35  
6684 STORY MACHINE 35 27  
6691 TEN PAC-ALL THE ABOVE 350 221

## \*\* SSM

6692 TRANSEND 1 (MMII/SM300) 89 71  
6693 TRANSEND 2 149 115  
6694 TRANSEND 2 \*DEMO 40 66  
6695 TRANSEND 3 275 212

## \*\* SSR

6696 INFOTORY-INVENTORY MANAGEMENT 295 192

\* SEE PAGE 3, MISSING PRICES

## SOFTWARE-APPLE

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## \*\* SUNRISE SOFTWARE

6767 TAX MINI-MISER 295 227

## \*\* SUPERSOFT

6768 OPTIMIZER 200 154

## \*\* SURVEYORS SUPPLY

6769 TRAV-POINT PLOTTING 1500 1250

## \*\* SYNAPSE SOFTWARE

6774 DRELBS 35 28  
6773 PICNIC PARANOIA 35 28  
6771 PROTECTOR II 35 28  
6772 SHAMUS 35 28  
6770 SLIME 35 28

## \*\* SYNERGISTIC SOFTWARE

6784 ADVENTURE TO ATLANTIS 40 32  
6787 BOLO 35 28  
6779 CAMPAIGN TRILOGY 30 24  
6788 CRISIS MOUNTAIN 35 28  
6793 DATA REPORTER 220 169  
6795 DATA REPORTER-HARD DISK 220 169  
6802 DIRECTORY MANAGER 2 30 24  
6775 DUNGEON CAMPAIGN 18 14  
6783 ESCAPE FROM ARCTURUS 30 24  
6785 GAME ANIMATION PAC 50 40  
6796 GLOBAL PROGRAM LINE EDITOR 65 52  
6801 HIGHER FONTS 15 13  
6800 HIGHER GRAPHICS 2 35 28  
6799 HIGHER TEXT 2 40 32  
6797 INTEGER BASIC COMPILER 150 115  
6782 LINGUIST 40 32  
6791 MAILING LIST DATABASE 50 40  
6789 MICROBE 45 36  
6792 MODIFIABLE DATABASE 80 63  
6786 NIGHTMARE GALLERY 30 24  
6778 ODYSSEY 30 24  
6803 PLANETARY GUIDE, THE 30 24  
6781 PROCYON WARRIOR 25 20  
6798 PROGRAM LINE EDITOR 40 32  
6794 SOFT SEVENTY WORD PROCESSOR 50 40  
6780 STAR GAZERS GUIDE 30 24  
6790 U-BOAT COMMAND 30 24  
6777 WILDERNESS & DUNGEON 33 26  
6776 WILDERNESS CAMPAIGN 20 16

## \*\* SYNTONIC SOFTWARE

6805 DECISION?MASTER 40 39  
6804 INTERLUDE 22 22

## \*\* SYSTEMS DESIGN LAB-SDL

6809 COLLEGE FOOTBALL 50  
6811 FORECASTER II-LINEAR REGRESSION 30  
6810 MULTIPLE REGRESSION 40  
6807 PRO FOOTBALL 50  
6808 PRO FOOTBALL GOLD EDITION 200  
6806 WIN AT THE RACES 50  
6812 WINNING AT THE RACES-BOOK 22

NMBR P ITEM LIST SELL

## \*\* STARSOFT

6699 CLIENT WRITE-UP \*DEMO 128  
6698 CPAPartner WRITEUP 695 647  
6697 CPAPartner WRITEUP & BILLING 1295 945  
6700 PROPartner 695 647  
6701 PROPartner \*DEMO 97

## \*\* STONEWARE

6712 COMPUCUBE 30 24  
6703 DB MASTER 229 170  
6714 DB MASTER SPECIAL 3 PAC 837 431  
6702 DB MASTER STAT PAC 129 97  
6704 DB MASTER UTILITY PAC 1 129 97  
6705 DB MASTER UTILITY PAC 2 129 97  
6715 DB MASTER VERSION 4.0 350 254  
6708 DB MASTER-HARD DISK 499 362  
6713 DB UTILITY PAC 1 \*DEMO 8  
6711 ELECTRONIC PRICE SHEET 100 78  
6706 GRAPHIC PROCESS SYSTEM 69 53  
6707 GRAPHIC PROCESS SYSTEM PRO 179 133  
6709 HOW TO RUN YOUR APPLE-BETAMAX 120 78  
6710 HOW TO RUN YOUR APPLE-VHS 120 78

## \*\* STRATEGIC SIMULATIONS

6716 BATTLE FOR NORMANDY 40 31  
6741 BATTLE OF SHILOH, THE 40 31  
6743 BOMB ALLEY 60 46  
6717 CARTELS & CUTTHROATS 40 31  
6722 COMPUTER AIR COMBAT 60 46  
6719 COMPUTER AMFUSH 60 46  
6723 COMPUTER BASEBALL 40 31  
6718 COMPUTER BISMARCK 60 46  
6721 COMPUTER CONFLICT 40 31  
6720 COMPUTER QUARTERBACK 40 31  
6747 COSMIC BALANCE 2, THE 40 31  
6724 COSMIC BALANCE, THE 40 31  
6725 CYTRON MASTERS 40 31  
6726 EPIDEMIC 40 31  
6744 FIGHTER COMMAND 60 46  
6727 GALACTIC ADVENTURES 60 46  
6728 GALACTIC GLADIATORS 40 31  
6729 GERMANY 1985 60 46  
6730 GUADACANAL CAMPAIGN 60 46  
6746 KNIGHTS OF THE DESERT 40 31  
6731 NAPOLEON CAMPAIGN 60 46  
6745 NORTH ATLANTIC 86 60 46  
6732 OPERATION APOCALYPSE 60 46  
6734 PRESIDENT ELECT 40 31  
6733 PURSUIT OF THE GRAF SPEE 60 46  
6748 RAPID DEPLOYMENT FORCE 35 27  
6735 ROAD TO GETTYSBURG 60 46  
6739 SHATTERED ALLIANCE, THE 60 46  
6736 SHOOT 'EM UP IN SPACE-SEUIS 40 31  
6737 SOUTHERN COMMAND 60 46  
6742 TIGERS IN THE SNOW 40 31  
6738 TORPEDO FIRE 60 46  
6740 WARP FACTOR, THE 40 31

## \*\* SUBLOGIC COMMUNICATION

6758 ESCAPE 30 24  
6749 FLIGHT SIMULATOR 34 27  
6755 FRONT LINE 30 24  
6750 GRAPHICS ANIMATION 60 47  
6757 GRAPHICS EDITOR 35 27  
6746 GRAPHICS FAMILY 120 93  
6752 MUSIC MAKER 40 32  
6745 PINBALL-NIGHT MISSION 35 28  
6756 ROAD BLOCK 30 24  
6751 SATURN NAVIGATOR (REQ GRA AMI) 35 28  
6753 SPACE VIKINGS 50 40  
6759 WHOLE BRAIN SPELLING 35 28  
6744 WHOLE BRAIN SPELLING-CHILDREN 35 28  
6763 WHOLE BRAIN SPELLING-FAIRYTALES 35 28  
6761 WHOLE BRAIN SPELLING-MEDICAL 35 28  
6740 WHOLE BRAIN SPELLING-SCIENTIFIC 35 28  
6762 WHOLE BRAIN SPELLING-SECRETARY 35 28  
6754 ZENDAR 30 24



## SOFTWARE-APPLE

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## \*\* SYSTEMS PLUS

\*\*\* REQ 2 DRIVES OR HARD DISK  
 \*\*\* SEE SOFTWARE DIMENSIONS  
 \*\*\* SEE SPECIAL NOTE!

6813	ACCOUNTING PLUS II-GL	395	281
6814	ACCOUNTING PLUS II-GL+1	725	469
6815	ACCOUNTING PLUS II-GL+2	995	617
6816	ACCOUNTING PLUS II-GL/AR/AP/IN	1250	762
6823	ACCOUNTING PLUS TRAINING MANUAL	66	66
6822	AP II-DATA PLUS	99	78
6820	AP II-GL PLUS	199	128
6821	AP II-INVOICES PLUS	295	192
6819	AP II-LABELS PLUS	99	78
6817	AP II-STANDALONE INVENTORY	495	313
6818	AP II-STANDALONE PAYROLL PLUS	425	269

SEE FORMS UNDER PRINTER PAPER

## \*\* SYSTEMS PLUS

6834	BUSISOFT (IN DEVELOPMENT)	110	
6832	CBASIC (CP/M)	150	128
6833	CIS COBOL (CP/M)	850	735
6825	CPA CLIENT WRITE-UP (CP/M)		1078
6828	DBASE II	700	519
6829	DPATCH (CP/M)	195	154
6837	MAILMERGE (CP/M)		97
6826	MEDICAL MANAGER (CP/M HARD DSK)		2083
6830	MICROLIB (CP/M)	295	231
6831	MICROTLX (CP/M)	150	115
6836	SUPERSORT (CP/M)		160
6824	THE LANDLORD	595	406
6827	THE WEDGE (CP/M)	199	128
6835	WORDSTAR (CP/M)		313

## \*\* T&amp;F SOFTWARE

6840	PROPERTY MANAGEMENT *DEMO		14
6839	PROPERTY MANAGEMENT PROGRAM	220	154
6838	SECUR-A-TEXT	50	37
6841	SLOT TRIVIA	30	22

## \*\* TAURUS

6843	CP+ (8" CP/M)	150	106
6842	CP+ (CP/M)	150	106

## \*\* TAX COMPUTER, THE

6845	BOOKKEEPER	100	72
6846	PAYROLL COMPUTER-CA/FED	100	72
6847	PAYROLL COMPUTER-FEDERAL	100	72
6848	PAYROLL COMPUTER-UT/FED	100	72
6849	TAX COMPUTER-CA	100	72
6844	TAX COMPUTER-FEDERAL	100	72

## \*\* TECHNICAL ANALYSIS GROUP

6850	COMPU TRAC (MMII)	1800	
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NMBR P ITEM

LIST SELL

\*\* TELEPHONE SOFTWARE CONNECTION ★  
 \*\*\* ORDER DIRECT VIA MODEM  
 \*\*\*\* 1(213)516-9432

6858	ANSWERING MACHINE (MMII)	35	
6886	BANNER MAKER	25	
6890	CATALOG SEARCH	25	
6855	CHESSE CONNECTION (MMII)	35	
6895	COMPUTER CONCENTRATION	25	
6860	DESK CALCULATOR II	30	
6866	DESK CALENDAR II	35	
6879	DISK CRYPTION	35	
6882	DISK DIRECTORY DATER	25	
6891	DISKETTE LABELMAKER	20	
6894	DISKETTE TESTER	25	
6870	DOUBLE BOOT LANGUAGE CARD	15	
6864	DOUBLE DOS	18	
6893	FID MOVER	15	
6873	FP REPORTER	15	
6885	GIANT GRAPHICS	35	
6854	GO-MOKU (MMII)	20	
6877	HELP	20	
6871	HEX/DEC FOR LANGUAGE CARD	15	
6881	KEND MASTER	25	
6889	LOST FILE RETRIEVER	35	
6859	LUNAR LANDER II	12	
6865	MATH TUTOR	25	
6884	MENU MAKER	25	
6875	MR. SMARTYPANTS	15	
6853	PHONE SECRETARY II	40	
6852	PICTURE TRANSFER	35	
6880	PRINTERS ASSISTANT	25	
6869	PROGRAMMERS LIBRARY	25	
6868	QUICK CLOCK ADJUST	15	
6862	SHAPE BUILDER	25	
6863	SHAPE EDITOR	15	
6861	SPELLING TUTOR	20	
6872	SUNRISE AND SUNSET	15	
6851	TELE-GAMMON	35	
6857	TELEPHONE TRANSFER II (MMII)	75	
6888	TELEPHONE UTILITIES	15	
6856	TERMINAL (MMII)	35	
6876	TEXT FILE EDITOR	30	
6867	TIME & MONEY METER	25	
6874	TIME TUTOR	25	
6892	USR FREE SECTOR COUNT	25	
6883	VIDEO LIBRARIAN	40	
6878	WALL STREET JOURNEY	25	
6887	WORLD CURRENCY TRADER	25	

## \*\* TERRAPIN

6896	TERRAPIN LOGO (64K)	150	115
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## \*\* THORN EMI HOME VIDEO

6897	LIBERATOR	40	34
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## \*\* TMO SOFTWARE

6898	FILEFAX	149	115
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## \*\* TURNING POINT SOFTWARE

6899	PENTAPUS	30	30
6900	TIME IS MONEY-AVAIL JUL	100	97

## \*\* TURNKEY SOFTWARE

6901	CEILING ZERO	30	24
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NMBR P ITEM

LIST SELL

## \*\* ULTRASOFT

6902	MASK OF THE SUN	40	29
6903	SERPENTS STAR	40	29

## \*\* UNITED SOFTWARE OF AMERICA

6907	APPLE WORLD	60	48
6910	BUG BATTLE	23	18
6906	CONQUEST W/SUPER KRAM CARD	250	192
6911	ROBOT BATTLE	30	24
6904	SPACE RAIDERS	25	20
6905	STAR DANCE	25	20
6908	SUPERGRAPHICS IN 3D	40	32
6909	SURVIVAL ADVENTURE	25	20

## \*\* VAGABONDO ENTERPRISES

6912	CEEMAC	75	53
6914	MAESTRO	35	26
6913	SPARKEE		20

## \*\* VERBATIM

7881	DISK DRIVE ANALYZER		
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## \*\* VERSA COMPUTING

6918	ADVANCED X-TENDED EDITOR-AXE	70	55
6923	ALPHABET SQUARES	30	24
6921	ANATOMY I	40	32
6918	BATTLESIGHT	40	32
6919	CA*HMASTER	300	224
6924	COLOR ME	30	24
6920	GLOBE MASTER II	40	32
6917	HERE'S HOLLYWOOD	25	20
6917	MEET THE PRESIDENTS	40	32
6922	SOLAR SYSTEM	40	32
6915	VERSAWRITER EXPANSION PAC-I	40	32
6916	VERSAWRITER EXPANSION PAC-II	40	32

## \*\* VIRTUAL COMBINATICS

6928	APPETIZERS (RED MC)	12	9
6926	MICRO BARMATE	40	29
6925	MICRO COOKBOOK	40	29
6927	SOUPS & SALADS (RED MC)	12	9

## SOFTWARE-APPLE

NMBR P ITEM

LIST SELL

## \*\* VISICORP PERSONAL SOFTWARE

6937	BUSINESS FORECASTING (REQ VC)	100	84
6930	DESKTOP PLAN 2	250	208
6940	DESKTOP PLAN 2 *DEMO		8
6935	VISICALC 3.3	250	192
6942	VISICALC 3.3 *DEMO		8
6939	VISIDEX	250	199
6929	VISIFILE	250	199
6943	VISIFILE *DEMO		8
6938	VISILINK	250	208
6931	VISIPILOT	200	167
6936	VISISCHEDULE	300	238
6944	VISISCHEDULE *DEMO		8
6934	VISITERM	100	81
6941	VISITERM *DEMO		8
6932	VISITREND & VISIPILOT	300	238
6945	VISITREND & VISIPILOT *DEMO		8
6933	VISITREND/PLOT-PRINTER DRIVER		5

## \*\* VOYAGER SOFTWARE

6946	STARSHIP COMMANDER	30	24
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## \*\* WADSWORTH ELECTRONIC PUBL ★

6947	STATPRO		1995
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## \*\* WESTWARE SOFTWARE

\*\*\* AVAIL STANDALONE MODULES...  
 \*\*\* GL/IN/AR/AP/JOB COSTING/  
 \*\*\* PAYROLL/DB

6954	CYCLE BILLING	295	250
6952	STANDALONES-ADD ONE	395	319
6953	STANDALONES-ADD ONE-HARD DISK	420	344
6950	STANDALONES-ANY 2 MODULES	790	636
6951	STANDALONES-ANY 2 MODULES-HARD	845	679
6948	SYSTEMS II EX	1595	1238
6955	SYSTEMS II EX *DEMO	25	20
6949	SYSTEMS II EX-HARD DISK	1695	1310

## \*\* WINNERS CIRCLE

6956	DISK ENCRYPTION SYSTEM	60	48
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## \*\* XEROX EDUCATION PUBLICATIONS

6960	OLD IRONSIDES	40	32
6959	STICKY BEAR ABC	40	32
6957	STICKY BEAR BOP	40	32
6958	STICKY BEAR NUMBERS	40	32

## \*\* XPS

6964	CRYPTO GENERATOR	25	22
6962	DEANS LIST	25	22
6963	DRILL INSTRUCTOR	40	35
6961	XPS DIAGNOSTICS/APPLE CILLIN II	50	43

## \*\* XYZZY SOFTWARE ★

6965	GRAM-A-SYST (SM300)	250	
6966	TLX-A-SYST	250	

## \*\* ZEITGEIST

6967	INVADER ATTACK-ADD/SUB FRACTNS	50	36
6968	INVADER ROUNDUP-ADDTH/SUBTR	50	36
6969	SPACE MOUSE-MUL/DIV FRACTNS	50	36
6970	SPACE SCANNER-MULTN/DIVSN	50	36

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APPLE SOFTWARE ENDS



# SOFTWARE-APPLE IIe

C NMBR P ITEM LIST SELL

## \*\* APPLE IIE SOFTWARE BEGINS

### \*\* CDEX

E 7050 TRAINING FOR THE APPLE IIE 60 48

### \*\* CMA MICRO COMPUTER

E 7071 CLIENT MEDICAL BILLING SYSTEM 1596 1235  
E 7072 DENTAL OFFICE MANAGEMENT II 1296 1015  
E 7073 DENTAL OFFICE MANAGEMENT IIC 1696 1211

### \*\* DESK TOP COMPUTER SOFTWARE

E 7181 GRAPH N CALC 199 140

### \*\* KENSINGTON MICROWARE

E 7370 FORMAT II (ENHANCED) 150 115

### \*\* LIGHTNING SOFTWARE

E 7387 MASTERTYPE 40 32

### \*\* MUSE SOFTWARE

E 7471 KNOW YOUR APPLE IIE 25 20  
E 7472 SUPER/TEXT PRO 99 78

### \*\* PERFECT SOFTWARE

#### \*\*\* ALL REQUIRE CP/M & BOCOL

E 3598 PERFECT CALC 295 126  
E 3597 PERFECT FILER 595 254  
E 3600 PERFECT FILER & CALC 750 313  
E 3596 PERFECT SPELLER 295 126  
E 3595 PERFECT WRITER 495 212  
E 3599 PERFECT WRITER & SPELLER 695 290

### \*\* QUARK

E 7596 LEXICHECK IIE (REQ WD JUG) 129 115  
E 7595 WORD JUGGLER IIE 239 213

### \*\* QUINSEPT

E 7606 FAMILY ROOTS 185 155

### \*\* SOFTWARE DIMENSIONS

E 7673 AP SUPER E-ACCOUNTS PAYABLE 350 224  
E 7674 AP SUPER E-ACCOUNTS RECEIVABLE 350 224  
E 7675 AP SUPER E-GENERAL LEDGER 450 281  
E 7676 AP SUPER E-INVENTORY 350 224  
E 7677 AP SUPER E-PAYROLL 450 281

### \*\* SOFTWARE PUBLISHING

E 7693 PFS:FILING SYSTEM 125 89  
E 7695 PFS:GRAPH 125 89  
E 7694 PFS:REPORT 125 89

### \*\* SOUTHEASTERN SOFTWARE

E 7728 DATA CAPTURE IIE 90 71

NMBR P ITEM LIST SELL

## \*\* SYSTEMS PLUS

E 7801 ACCOUNTING PLUS SUPER-GL/AR/AP 1150 710  
E 7798 ACCOUNTING PLUS SUPER/E-AP 350 224  
E 7797 ACCOUNTING PLUS SUPER/E-AR 350 224  
E 7796 ACCOUNTING PLUS SUPER/E-GL 450 281  
E 7800 ACCOUNTING PLUS SUPER/E-INVENRY  
E 7799 ACCOUNTING PLUS SUPER/E-PAYROLL

## \*\* VIRTUAL COMBINATICS

E 7845 APPETIZERS (REQ MC) 12 9  
E 7840 MICRO COOKBOOK 40 29  
E 7843 SOUPS & SALADS (REQ MC) 12 9

## \*\* VISICORP PERSONAL SOFTWARE

E 7861 VISICALC ENHANCED 250 192

## APPLE IIE SOFTWARE ENDS

# SOFTWARE-APPLE III

C NMBR P ITEM LIST SELL

## \*\* APPLE III SOFTWARE BEGINS

### \*\* ADVANCED SOFTWARE TECHNOLOGY

3 6975 QUICK & EASY DATA MASTER 70 59

### \*\* APPLIED SOFTWARE TECHNOLOGY

3 6985 PASCAL PROGRAMMER 245 173  
3 6984 VERSAFORM 495 340  
3 6986 VERSAFORM-HARD DISK VERSION 495 340

### \*\* ASHTON-TATE

3 6993 DBASE II 695 494

### \*\* BEAMAN PORTER

3 7032 POWERTXT (REQ PASCAL) 199 153

### \*\* CMA MICRO COMPUTER

3 7063 DENTAL OFFICE MANAGEMENT I 860 690  
3 7064 DENTAL OFFICE MANAGEMENT III 1596 1235  
3 7065 DENTAL OFFICE MANAGEMENT IIH 1696 1211  
3 7066 DOCUWRITER TEXT PROCESSOR 250 224  
3 7067 MEDICAL OFFICE MANAGEMENT III 1696 1235  
3 7068 MEDICAL OFFICE MANAGEMENT IIH 1696 1211  
3 7069 MEDICARD (REQ VISICALC) 250 224  
3 7070 MEDIREC 350 306

### \*\* DATAMOST

3 7132 WRITE ON 130 101

C NMBR P ITEM LIST SELL

## \*\* DENVER SOFTWARE

3 7173 ACCOUNTING TUTOR (128K) 250 176  
3 7174 EASY UPGRADE TO HARD DISK 183  
3 7163 EASY-EFFECTIVE ACCTG SYS (128K) 750 510  
3 7168 EASY-EFFECTIVE ACCTG SYS (HD) 1000 679  
3 7164 EASY-EFFECTIVE ACCTG SYS \*DEMO 97  
3 7175 FINANCIAL PARTNER TO EASY 183  
3 7171 ROSE (128K) 350 247  
3 7165 SERVICE MANAGER (128K) 1900 1244

## \*\* DESIGN TRENDS ★

3 7176 SOFTAX (REQ VISICALC) 395

## \*\* EXECUWARE

3 7244 E.D.B. 175 136  
3 7241 FINANCIAL ANALYSIS 93 73  
3 7243 KNOW YOUR CLIENT 125 98  
3 7242 REAL ESTATE ANALYSIS 275 213

## \*\* GREAT PLAINS SOFTWARE

### \*\*\* ALL REQUIRE HARD DISK

3 7271 GPS ACCOUNTS PAYABLE 495 353  
3 7270 GPS ACCOUNTS RECEIVABLE 495 353  
3 7269 GPS GENERAL LEDGER 495 353  
3 7273 GPS INVENTORY W/POINT OF SALE 595 424  
3 7272 GPS PAYROLL 495 353  
3 7274 GPS-COMplete SYSTEM 2575 1625

## \*\* HIGH TECHNOLOGY ★

3 7305 JOB CONTROL SYSTEM-100 JOBS  
3 7306 JOB CONTROL SYSTEM-400 JOBS  
3 7307 JOB CONTROL SYSTEM-800 JOBS

## \*\* IDEAL SYSTEMS

3 7318 INTROSTAT 2.2-COPY PROTECTED 85 78  
3 7317 INTROSTAT 2.2-UNPROTECTED 125 112

## \*\* INSOFIT

3 7358 ALD SYSTEM III 75 59  
3 7357 TRANSFORTH III 125 97

## \*\* LINK SYSTEMS

3 7393 DATAFAX III 249 192  
3 7390 LINK INDEX III 195 150  
3 7392 LINK SAMPLER III 60 48  
3 7391 LINK VIDEO III 55 44

## \*\* MICRO COM

3 7405 MICRO/COURIER (SM) 150  
3 7403 MICRO/TERMINAL (SM) 100 72

## \*\* MICRO INFORMATION SYSTEMS

3 7407 ESQ-1 (CP/M 2.38) 2000 1190  
3 7406 MAGIC QUILL (CP/M 2.38) 2000 1190  
3 7408 PROMOT (CP/M 2.38) 2000 1190  
3 7410 SCHEDULER (CP/M 2.38) 995 611  
3 7409 TAXEXEC (CP/M 2.38) 995 611

# SOFTWARE-APPLE III

C NMBR P ITEM LIST SELL

## \*\* MICRO LAB

3 7416 DATA MANAGER 500 375

## \*\* MIND SYSTEMS

3 7465 TRANSFER III 60 48

## \*\* QUARK

3 7603 CATALYST-HARD DISK BOOT 149 131  
3 7602 DISCOURSE-SOFTWARE SPOOLER 125 109  
3 7599 LEGAL DICTIONARY (REQ WD JUG) 85 78  
3 7598 LEXICHECK (REQ WD JUG) 149 131  
3 7604 MAIL LIST MANAGER INTERFACE 35 33  
3 7600 TERMINUS (REQ WD JUG) 89 81  
3 7601 TYPEFACE (REQ WD JUG) 175 154  
3 7597 WORD JUGGLER 295 256

## \*\* REVEAL SOFTWARE

3 7612 PORTFOLIO/CLIENT MANAGEMENT SYS 1550 1292

## \*\* SMITH MICRO SOFTWARE

3 7653 STOCK PORTFOLIO 185 142

## \*\* SOFTWARE PUBLISHING

3 7690 PFS:FILING SYSTEM 175 123  
3 7692 PFS:GRAPH 175 123  
3 7691 PFS:REPORT 125 89

## \*\* SOFTWARE RESOURCES ★

3 7706 OPTION ANALYSIS SYSTEM-O.A.SYS 395  
3 7705 SMART (MHII/SM300/1200) 1950

## \*\* SOLID SOFTWARE

3 7712 COMMERCIAL PROPERTY ANALYSIS 895 556  
3 7711 COMMERCIAL PROPERTY MANAGEMENT 1495 915  
3 7710 MEDICAL DATA MANAGEMENT 1495 915  
3 7709 SALES ENTRY ORDER W/AR & INV 1495 915

## \*\* SOLUTIONS

3 7720 VIS/BRIDGE/REPORT (VISICALC) 79 73  
3 7717 VIS/BRIDGE/SORT (VISICALC) 89 81

## \*\* STONEWARE

3 7752 HOW TO RUN YOUR APPLE-BETAMAX 120 78  
3 7753 HOW TO RUN YOUR APPLE-VHS 120 78

## \*\* SUNRISE SOFTWARE

3 7762 TAX MINI-MISER 295 227

## \*\* SYNERGISTIC SOFTWARE

3 7784 WORD WEAVER 100 79

## \*\* VISICORP PERSONAL SOFTWARE

3 7857 BUSINESS FORECASTING (REQ VCA) 100 84  
3 7858 DESKTOP PLAN III 300 250  
3 7859 VISICALC ADVANCED 400 310  
3 7860 VISISCHEDULE 300 238

## APPLE III SOFTWARE ENDS



\*\*\*\*\*  
**G & H ASSOCIATES**  
**P.O. BOX 51168**  
**SAN JOSE, CA 95151**

**SAVE TAX DOLLARS NOW! MAKE YOUR COMPUTER PAY FOR ITSELF. AT  
LAST HERE ARE IMPORTANT -HOW TO- SAVE MONEY IDEAS FOR YOU.**

- a) **TAX HINTS for APPLE owners is a program that explains how, and computes, how much you can write off your Federal Income Tax. It computes depreciation, investment tax credit or expense for the four following uses of the Personal Computer:**

- |   |                 |   |                                     |
|---|-----------------|---|-------------------------------------|
| 1 | BUSINESS USE    | 3 | AS EQUIPMENT USED TO PRODUCE INCOME |
| 2 | R & D EQUIPMENT | 4 | AS AN EDUCATIONAL EXPENSE           |

**It is available on disk for \$25.00 to 3A members.**

- b) **RF Modulator with computer/game TV switch & cables and TV sound. \$35.00 Plus \$2.00 shipping.**

**CASH, CERTIFIED CHECK OR MONEY ORDER**  
**ORDER THE ABOVE DIRECT - NOT FROM 3A**

\*\*\*\*\*

## **WHAT YOU NEED TO KNOW ABOUT PERSONAL COMPUTERS**

The value of a specific feature depends on what sort of work you want your computer to perform.

Hopefully, we can help you determine which imputations are necessary and which features will be beneficial for your own personal computer application.

Computers are comprised of miniaturized electronic circuits that operate by storing and transmitting electrical signals. They are capable of taking information in, storing it, retrieving it, and manipulating it. For example, a computer can search an inventory list of hundreds of thousands of garments and determine how many are red, size 10, and made of cotton.

As you probably already know, before the computer can do its job, it needs to be loaded with a program. Programs, also called software, are very detailed

instructions that tell the computer what to do. The computer and software together make one unit that is capable of doing a particular job. Some computers are dedicated to a single job. These dedicated computers, like the ones in aircraft autopilots, always use the same program. Other computers can be used for many different tasks. By simply changing the program, the computer is prepared to do a different job. Personal computers are a good example of these multiple-use computers.

The computer is made of several major parts that work together to manipulate and move information. It has a keyboard - very similar to a typewriter's - that allows you to enter information. There is a video screen that can display letters and numbers in the form of a typed page or graphic images and pictures. The computer also includes disk drives - equipment to "play" magnetic disks that store

information in a form the computer can find quickly. Some personal computers use cassette tapes as their storage medium. Tape storage is slow and cumbersome for daily work, but it may be acceptable for some situations.

The computer has a processor, which stores information electrically in circuits called main (or primary) memory. Main memory holds the program that tells the computer what to do and holds the data that the computer is using.

You communicate with your personal computer primarily through the keyboard. Personal computers let you use easy to understand command languages or menus.

You can tell the computer what you want it to do by selecting from a menu - a list of choices displayed on the screen. For instance, the menu might give you these choices:

Continued on Page 123.

Continued from Page 122.

Ideally, your personal computer will have many different menus that list all the possible commands you need. You should also be able to go from one menu to another easily. The real advantage of a menu-driven system is that you don't need to memorize any of the commands that run your personal computer.

You can also communicate with the computer by loading a program disk into the disk drive. A program disk contains thousands of instructions that tell the computer how to do the particular job. It also contains the instructions that will display the menus of choices that let you direct the program.

Your disks can also store information or data. Your correspondence might be on one disk, the information for your forecasting spreadsheets on another, and your inventory records on a third.

The computer will communicate with you primarily through the video screen. This is where it prompts you for commands or displays menus which you use to control the program.

Personal computers usually give you messages on the screen when the program doesn't understand what it is supposed to do. Sometimes you need to retype a command or check the disk drives to make sure that the correct disk is inside.

It is also possible to send the information to another computer. If the computer is in the same building, the information can be sent directly over a communications line. But if the other computer isn't in the same building, you will usually be communicating through telephone lines using a modem (which stands for modulate/demodulate). The modem

translates the signals from the computer into high-frequency communications signals. These high-frequency signals can then be sent over telephone lines to another modem at the receiving end that translates them back to computer signals. Some modems plug directly into the telephone line and others use an acoustic coupler - a piece of equipment that accepts a standard telephone receiver. This is a convenient and inexpensive way to connect your personal computer to larger computer systems.

The information your computer uses is stored on magnetic disks. Disk storage is much more permanent than the information in main memory because it doesn't require electrical current to maintain it.

Disks for computers come in three general types: diskettes (also called "floppies"), hard disks, and Winchester disks. Diskettes work very well with personal computers because they are inexpensive and small enough to be stored and transported easily. Hard disks hold more information than diskettes and they are also removable. But most hard disks or disk packs are too large and expensive for use on personal computers. The most advanced form of information storage is Winchester disk technology. Winchester disks are permanently installed, hold much more information than diskettes, and they can access the information much faster. Winchester disks are now available on some personal computers. A most frequent question asked is, can you really trust your personal computer to store your important business information? The answer is yes. With a few precautions you shouldn't have any trouble keeping your vital business records on your personal computer.

Although disks will faithfully store information for years, making a copy of important disks and storing them in a safe place is the easiest way to protect information.

The computer sees information in a very different way than we do. Its circuits are designed to monitor electrical signals. Two states - electrical signals and no electrical signals - are the basis of what information looks like to a computer.

Each line can be either on or off - signals or no signals. The two states are usually represented with 1 and 0. This method of passing along information is called a binary (two-state) system. Codes using 1's and 0's have been developed to represent all of the information that the computer is working with. Each 1 or 0 in the code is a bit, which stands for binary digit. It takes 1 byte (8 bits) of disk space or main memory to store one letter or symbol.

A typewritten page holds 250 words (1,500 characters and spaces). It would take 1,500 bytes (12,000 bits) of computer space to store a page.

In most computers eight bits are equal to one byte. The size of main memory and the amount of magnetic storage on a disk are usually measured in bytes - the number of characters that can be stored there.

Personal computers are often categorized by the length of their instructions. These are typically either eight bits, twelve bits, or sixteen bits long. The individual instructions in a 12-bit or 16-bit computer can do a lot more work than the instructions in an 8-bit computer.

Continued on Page 124.



All of the information the computer handles has to go through the main memory. The memory has to hold three things at once - some essential operating system instructions, a program, and the information the program is using. A well-designed personal computer will have an optimum balance between memory and software.

All of these elements - the operating system, program and information - have to work together within the memory.

Memory size is usually measured in Kbytes. The main memory on personal computers typically runs between 8 Kbytes and 256 Kbytes.

The other important way that you will get information from your personal computer is from a printer. Personal computers normally work with character printers, as opposed to line printers.

Character printers come in two general types - formed character and dot-matrix. Most character printers use the same impact printing technique as a regular typewriter - an inked ribbon is pressed against a piece of paper to make a mark.

A formed character printer can give you a printed copy that looks just like a typewriter original. It uses a solid font for each character much like a regular typewriter.

With a dot-matrix printer, a set of wires in the printhead strikes the printer ribbon to form a character. Therefore, each character is composed of tiny dots. While the dot-matrix will not produce copy that is as sharp as a formed character printer, they are less expensive, print fast and offer a wide selection of print styles.

A computer needs to be told how to respond to any given input. This is what a program does. The computer goes through the instructions in the program one step at a time from the beginning of the program to the end. It can do this so rapidly it appears to be very intelligent, capable of processing hundreds of thousands of instructions per second.

The key to a personal computer's usefulness is the software (the programs) you have to run on the computer. If the computer's instructions, memory size, and storage space allow for it, a programmer can create software that will do a great deal of work and be very easy to use. By following the menu choices and the computer prompt messages you should be able to sit at the computer and almost immediately begin to do productive work.

There are times when you might want to create a program to do some specialized work with your personal computer. You can create a program by writing all of the instructions that will tell the computer what to do with each piece of information it will encounter while doing the job. These instructions are written in a programming language. The most popular language for personal computers is BASIC. BASIC uses simple English-like instructions that make it one of the easiest programming languages to learn.

Although the program tells the computer how to do a particular job, there are instructions that are more basic than the program itself. These instructions also reside in main memory and tell the computer how to do the steps that the program requires. These instructions, known as the operating system, control the resources of the computer.

The operating system requires only a minimum amount of main memory, so the rest can be devoted to the program and the data.

When you buy a computer for business, you are just beginning a new way of dealing with information. It is very important that the computer you select has features that allow you to communicate with other computers and let you easily upgrade your system. You should be able to add more storage capacity to your personal computer when you need it. This could be provided by another diskette drive or a Winchester hard disk.

The final selection feature you need to consider - and possibly the most important - is the software that will work on the computer. Ideally, your personal computer should be able to run a wide range of software. Some personal computers are flexible enough to provide the services that often require a second or third computer. These services are usually a function of their being able to run sophisticated terminal emulation and communications software. □

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ESP

### KLEEN LINE® SECURITY SYSTEM Hi-tech security for Phone/Modem/Data Lines

4 pin Modular - (standard) telephone connector (RJ-11 type)  
Available with AC Power Line protection options  
standard 2 wire phone line; Phone Lines 3 & 4 - Guarded - 180 volt clamp;  
Auxiliary Lines 2 & 5 - Straight through

Model Number	Price
PDS-11	3570
PDS-13MI	3571
PDS-14	3572
PDS-13M( )	3573
Specify Clamp Level:	3574
Specify Lines:	3575

8 pin Modular - Keyed, phone connector (RJ-45 type)  
8 pin modular jacks normally use 4 & 5 (red and green) as phone lines;  
Auxiliary Lines 1, 2, 3, 6, 7 & 8 may be used for a variety of purposes including additional phone lines. (4 pin modular plugs will fit into the 8 pin modular socket. Phone lines 3 & 4 of 4 pin plug will pick up phone lines 4 & 5 of 8 pin modular socket, for through phone service)

Model Number	Price
PDS-11	3570
PDS-13MI	3571
PDS-14	3572
PDS-13M( )	3573
Specify Clamp Level:	3574
Specify Lines:	3575

1. Unless otherwise specified:  
• Phone lines, designated with "P", following line numbers, are clamped at 180 volts  
• Auxiliary lines, designated with "A", following the line numbers, are clamped at 30 volts  
• Special clamp voltage requirements designated by line numbers & "ISO" (i.e., PDS-45P-12 ISO-20) - lines 1 & 2, 20 volt clamp

3. All unguarded lines are connected straight through.

PRICING: Prices for the PDS-45( ) series are based on number of guarded lines required. Consult your equipment Owner's Manual or the manufacturer.

Lines guarded	Price
2	39
3	48
4	56
5	64
6	73
7	80
8	89

Examples: PDS-45P-367A: 4 & 5 - phone - 180 volt clamp; 3, 6 & 7 - auxiliary - 30 volt clamp; 1, 2 & 8 straight through 5 Guarded lines

PDS-45P-367A-12 ISO-20: 4, 5 - phone - 180V clamp; 3, 6, 7 - Aux-30V clamp; 1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

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1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

1, 2 - Special Order - 20V clamp; 8 straight through; 7 guarded lines

ESP

### KLEEN LINE® SECURITY SYSTEM Hi-tech security for phone/modem/data line

Two stage, ultra-fast, self-reset security circuit stands guard against damage to modular connected phone line communications or data equipment.

KLEEN LINE® SECURITY PREVENTS:

- Lightning damage
- Storm induced hi-voltage spikes
- Inductive spikes from motors or relays

the KLEEN LINE® SYSTEM will guard:

- Modems
- Answering machines
- Automatic dialers
- Smart phones
- Wireless phone base station
- Facsimile equipment
- Telephone remote control
- Short haul data lines
- Private telephone monitor lines
- Telephone remote sensing

KLEEN LINE® SECURITY options: Protect telephone accessories from AC Power Line Spikes, Surges & Interference.

ISUP: Spike/Surge Suppressor option for equipment protection. Provides security from lightning or switch-gear high voltage spikes found on AC Power Lines.

ISFK: Noise Hash filter to remove power line interference before it can contaminate phone or data circuits. Combined with Spike/Surge Suppression described above.

Filter-Suppressor:

- 100 KHZ to 200 MHZ
- Balanced-Pi filter
- Inductively isolated ground
- 6500 Amp, 8/20 usec Suppression

Power:

- 125 VAC, 8 Amps (1KW) 3 wire, 1 socket

Power:

- 125 VAC, 8 Amps (1KW)

- 3 wire

- 1 socket (NEMA 5-15)

Power:

- 125 VAC, 8 Amps (1KW)

- 3 wire

- 1 socket (NEMA 5-15)

Power:

- 125 VAC, 8 Amps (1KW)

- 3 wire

- 1 socket (NEMA 5-15)

Power:

- 125 VAC, 8 Amps (1KW)

- 3 wire

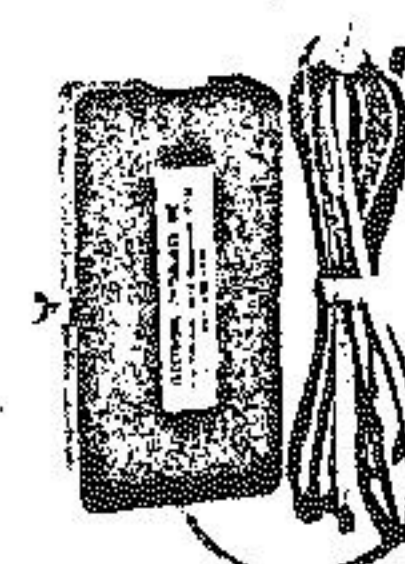
- 1 socket (NEMA 5-15)

Power:

- 125 VAC, 8 Amps (1KW)

- 3 wire

- 1 socket (NEMA 5-15)



PDS-11

PDS-45( ) ISUP

NOTE: Direct lightning hits may unleash over 1 million horse power! Disaster may cause long term power line over-voltage! While nothing can completely tame these wild situations, equipment damage may be greatly limited by Spike/Surge Suppressor and KLEEN LINE® SECURITY installation.

ESP Electronic Specialists, Inc.  
171 S. Main St., Box 388, Natick, Mass. 01760 (617)655-1532

Toll Free Order Desk 1-800-225-4876

OPTIONS: either option for any model this page

ISUP - Spike Surge Suppressor

ISFK - Noise Filter/Spike Suppressor

Examples:

PDS-45P-367A/ISUP: Spike Suppressor & 5 guarded lines

PDS-11/ISFK: Suppressor/Filter & 4 pin, 2 guarded lines

Add \$25.00 21

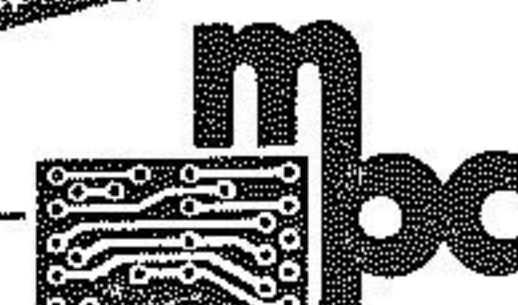
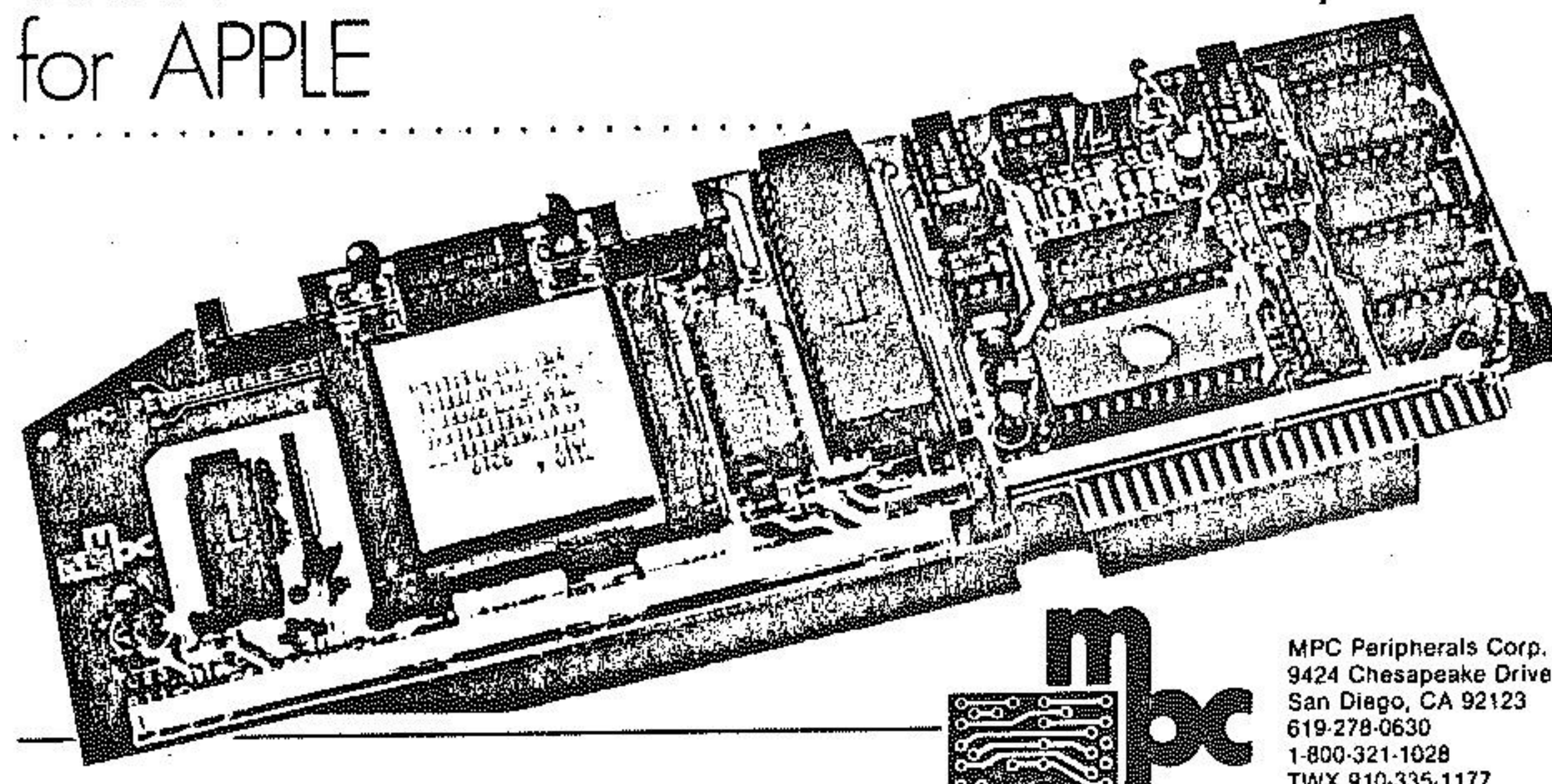
Add \$5.00 24

\$122.95 85

\$1.95 62



# BUBDISK™ 128K Non Volatile Bubble Memory for APPLE



MPC Peripherals Corp.  
9424 Chesapeake Drive  
San Diego, CA 92123  
619-278-0630  
1-800-321-1028  
TWX 910-335-1177

## Specifications:

- 128K non volatile memory
- Portable
- Solid state Bubble Memory
- No moving parts
- Quiet
- Not affected by heat, dust, grease, grit
- Immune to pollution and vibration
- Can replace floppy disk
- Slot independent
- Individually pre-tested
- Three times faster than standard floppy disk

## Product Description:

The Apple Bubble Memory Module is 128K bytes of non-volatile memory and is ideal for use as a fast disk. In addition to the time savings gained by utilizing the bubble, it also increases data storage reliability. The "stand-alone" capabilities provided by the on-board boot prom provide the Apple user with non-volatile mass memory that is more rugged than a floppy and is completely portable. The bubble Memory Module is a MUST for those who need highly reliable mass memory in a hostile environment.

The module comes complete with disk-emulation software for DOS 3.3 and patches are available for Pascal.

As with all MPC products, the BUBDISK BUBBLE MEMORY MODULE is covered under our TWO YEAR "NO HASSLE" WARRANTY. If this product should fail for any reason during the warranty period, return it to MPC for replacement, no questions asked.

## TWO YEAR "NO HASSLE" WARRANTY

## MAKES BACK-UP COPIES OF PROTECTED SOFTWARE QUICKLY, EASILY, WITH JUST A PUSH OF A BUTTON.

New software locking schemes have rendered even the latest generation of copy programs virtually unusable. Locksmith™, Nibbles Away™ and other "Nibble copiers" require complicated parameter settings, much patience and great effort to use. More often than not, the results are disappointing. WILDCARD is different. Rather than copying disks track by track, WILDCARD ignores the disk and any copy protection encrypted on it. Instead, WILDCARD takes a snapshot of memory in your Apple® II.

Now you can make back-up copies of protected software with the push of a button.

## Features

- Hardware copying device...push button operation.
- Copies ALL\* memory resident software, 48K or 64K.
- No Parameters are necessary.
- WILDCARD lives in any slot.
- WILDCARD is undetectable by software.
- Produces autobooting disk in 2 minutes.
- Copies become accessible for alterations.
- Utility software is included.

System requirements: Apple II with 64K.  
\* Wildcard does not operate with CP/M\* or other microprocessor based software.

\$129.95 direct from East Side Software Co., 344 E. 63 St., Suite 14-A, New York City 10021, 212/355-2860.

**IMPORTANT NOTICE:** The WILDCARD is offered for the purpose of enabling you to make archival copies only. Under the Copyright Law you, as the owner of a copy of a computer program, are entitled to make a new copy for archival purposes only and the WILDCARD will enable you to do so. The WILDCARD is offered for no other purpose and you are not permitted to utilize it for any other use, other than that specified.

## PUBLIC DOMAIN SOFTWARE

### HOW TO EXCHANGE PROGRAMS

It would be best (but is not required) that you send 3A a hard copy list by volume number of the program titles you have to exchange, including their sector lengths, before you send your disks. Then we can indicate which programs/volumes we would like to exchange. In this way, you avoid possible disappointment! This does not mean you have to use lots of your time editing and copying to special exchange disks. It means you will know BEFORE you send your disks how much exchange credit you can expect. If you send your disks first, you risk we may say we already have the programs you sent and not give you the exchange credit you expected and thus feel cheated. We will not cheat you, but it's best to feel secure.

### SELL PUBLIC DOMAIN PROGRAMS

The subject has been raised and needs to be clarified. 3A doesn't SELL public domain programs. We charge a fee to COPY public domain programs for you from our library. We know detractors will scoff and say, "Nuts, they're selling the stuff", but by definition, when a program is declared PUBLIC DOMAIN that means anyone is free to sell it, recode it, praise it, condemn it, rename it, revise it, destroy it, learn from it, enjoy it, copy it for others, in short, do any darn thing they want with it. So, we charge a COPY FEE for the service and we charge for the disks. And so do several other groups, who have adopted our library. But, however anyone uses a public domain program they should insure the original authors' name address, comments and so on remain intact within the program!

Continued on page 127.

PUBLIC DOMAIN SOFTWARE  
PRICES ARE ON PAGE 128.

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### COPYRIGHTED (C)

The abbreviation (C) after a public domain program title indicates it contains a copyright statement AND was contributed to the public domain by its author.

### OTHER APPLE LANGUAGES

Forth is another language among several our Apples can handle. We've been asked to ask you to contribute programs in this language, and to be sure to indicate which version. So, let's hear from you.

### EPSON HIRES DUMP

Utility Volume 228, from Epson, HAD a glitch! When asked to print a SMALL picture it performs perfectly, albeit the picture is on its side. When asked to print a LARGE picture, the printer starts out and continues to print for about 5 to 7 passes across the page, then begins to FORM FEED. A revised version has been received. If you wish, return your copy of 228 and we will recopy it for you, free.

### NO MORE 13 SECTOR/DOS 3.2

When you order copies of public domain programs we copy in DOS 3.3/16 Sector. There have been no requests for copies in DOS 3.2/13 Sector - for a long time now, thus we have rubbed 'em out.

### NEW PUBLIC DOMAIN VOLUMES

3A ART AND GRAPHIC 018 is a demonstration group of graphics programs from Vagabondo Enterprises called FIRE ORGAN (C). Fire Organ is abstract entertainment graphics (requiring a color Monitor/TV) and strongly favors musical accompaniment and subdued lighting. The VISUAL graphic "scores" were composed by 3 independent graphic artists using CEEMAC, a visual composition language by Vagabondo. Every key on Apple produces new and marvellous color graphics.

## PUBLIC DOMAIN SOFTWARE

Documentation can be read from files on this disk. This is a superb group of programs.

3A APPLE TUTOR 002 is an Applesoft BASIC instructional set from Ireland. It is menu driven and an excellent way to learn Applesoft BASIC.

AND OF COURSE THERE ARE SEVERAL OTHER new volumes and many more to come.

### PUBLIC DOMAIN TITLE INDEX

A catalog of the entire public domain library BY PROGRAM TITLE is available on disk. It is essentially the same listing as in this catalog. It is renamed AAA Title Library 250--formerly Library 007. This Binary program will load your library by reading each disk catalog, save the data to a data program/disk, sort the program titles in alpha sequence, or sort by type (A, I, B, T), or by volume number, save them as sorted or not, then display them on the screen, or print them if you have a printer. It's fast. The catalog program does an extraordinary job! It is also available on a Utility volume, but without the Text Files containing the 3A library titles. File Disk Catalog is documented by John Backman, Seattle, WA and his excellent "how to" instructions are included on the disk, but to read the instructions you must have a printer.

### GOOD PROGRAM, WRONG DOS

The following program works well in DOS 3.2, but not DOS 3.3...."Random Drill Tutorial" on Tutor 000. No one has yet revised it to work in DOS 3.3. No doubt other good 13 Sector programs that were muffed to 16 Sector will not work under DOS 3.3. We need your help to identify these by program name. Perhaps a programmer in the group will update the best of them to work in 3.3. In any case, you know you can puffin/niffum them back to DOS 3.2.1 and use them. Right?

### INTEGER/APPLESOFT BASIC

An Integer BASIC is available for you folks that have an Apple II Plus with only Applesoft BASIC in ROM and can't yet afford the Apple Integer ROM card or a 16K RAM Card (Apple Language card). Likewise, if you have an Apple II with only Integer BASIC in ROM, an Applesoft BASIC is available. Look for "BASIC-Integer" or BASIC-Applesoft" on the 3A Tutor and Utility volumes. (BRUN the BASIC-Integer program.) These RAM languages are a fine temporary alternative until the day you buy a 16K RAM card. Right now 3a has a 16K RAM Card by Davong for you for only \$40.

### DOS IS COPYRIGHTED

Did you know or even think about it? The DOS or Apple DISK OPERATING SYSTEM comprising the first 3 outside tracks on each disk is copyrighted by Apple Computer Inc. So is the CP/M operating system by Digital Research, Inc.

### FORMAT YOUR DISKS?

No need to INITIALize any of your disks when you order public domain volumes and send your own disks. Note--we do not copy on the reverse side anymore.

### LABEL YOUR DISKS

If you send your disks, please label each with the 3A Volume Number and Title you want copied on it. That helping hand will speed up delivery back to you and prevent confusion interpreting your order.

### LOAD, LIST AND LEARN

Very often it pays in learning to LOAD, then LIST a program and read the REMarks. This is particularly true when you RUN a program and nothing seems to happen. □

Continued on page 128.



## PUBLIC DOMAIN SOFTWARE

Continued from page 127.

3A maintains a library of over 185 disk volumes of PUBLIC DOMAIN PROGRAMS for the Apple II/IIe/III, Franklin, Basis and other Apple-compatible computers. Each disk volume contains from 2 to 40 programs and usually fills-up 1 disk side! Included are 8 CP/M and 29 Pascal Volumes. Your cost on 3A Media disks:

- 1 to 9 are \$3 each.
- 10 to 99 are \$2.55 each.
- 100 or more are \$2.50 each.

Deduct 5% when you order 50 or more public domain volumes at one time, (whether copied on 3A Media disks or on any other brand of disks). This discount is in addition to our Fall Sale discount.

Add \$1 per disk volume when copied on any other brand of disks (or on your disks). 3A Media disks are excellent quality generic brand 5.25 disks with Hub Rings and envelopes.

Add \$2 packing and handling per order. All orders must be prepaid in USA\$ dollars! Read our shipping instructions.

We no longer copy on the reverse side of disks only because it's too much hassle. The Mixed Series has been discontinued, and volumes are no longer available in Apple DOS 3.2.

OR FOR FREE, LET'S EXCHANGE a disk full of your programs that are not in our catalog for a disk of our programs. Your EXCHANGE programs may be long or short, modified or original; in Integer and Applesoft BASIC, Pascal, Pilot, FORTH, LISA, Microsoft BASIC, and so on, DOS 3.3, CP/M or Pascal!

Free exchanges and contributions have helped the 3A library grow. Order and exchange as many public domain volumes at one time as you wish.

We will not knowingly list a program in our public domain library that's protected by copyright. Programs with a (C) after the title indicate a known copyrighted program that has been donated to the public domain.

If you send YOUR disks for us to copy onto and expect your packing materials returned (such as disk envelopes, foam blocks, plastic library cases, padded envelopes and so on), please enclose return shipping equal to what you paid, else we will re-pack to reduce our expense and throw out your packing materials if they are too heavy!

If it happens that a program on a public domain disk volume we copied for you is "missing;" that is, the title appears in the disk catalog but when you RUN it nothing happens and when you LOAD it nothing is there, OR if a program is "bombed" in its middle; that is, the statement lines are not in numerical sequence; hence, the program quits after it has begun, or may not RUN at all, then.....

Write down the title of the bad program and return your disk and we will recopy it for you free! This offer applies to any public domain program you find that is bombed or seems to be, ANYTIME, regardless whether the fault seems to be the disk, your Apple, 3A or your electric company. In doing the above you help to upgrade the quality of the programs in both our libraries.

Public Domain software volumes may NOT be returned for refund or exchange; however, they will be recopied if they are faulty, or replaced if the disk is bad on either side).

## MANY THANKS

It's my turn to say, "Keep up the good work," and thank you for telling us about programs that don't work, and those that are copyrighted or duplicates. Without your help we might never discover them.

WHO CONTRIBUTES PROGRAMS? Apple User Groups, college students and YOU, Apple owners, from 'round the world. Your generosity is boundless.

## PROGRAM WON'T RUN

Almost every program in the catalog was coded on an Apple of different memory size and DOS version. Some were coded by amateurs who are learning to program. Some are experiments in futility. Some are great. Remember this when you find a program on a 3A volume that won't run, and don't lose your cool. We won't try to fool you and probably couldn't anyway. If you can't fix a program yet, then identify the "faulty" program (if it is), overlook it for awhile and when your Apple learns how to work better, send 3A a copy of the revised program.

## OTHER PRINTER PROGRAMS

There are other printers out there besides Epson. Surely many non-Epson printer driver routines are in use. Why not contribute yours to 3A for others to share?

## LOST THE MISSING LANGUAGE?

Do you have a 16K RAM card (Apple Language Card) installed in your Apple? After booting and loading the missing BASIC, either Applesoft or Integer, then booting another disk do you lose the loaded language? A modified DOS is now on all 3A disks that doesn't kill the loaded language! To transfer the modified DOS to your disks, boot a 3A disk, then INIT one of your blank disks and you will have transferred the modified DOS to the newly INITed disk. (Use Super Disk Copy by Sensible Software to make the task a breeze.) □

## PERSONAL DOMAIN SOFTWARE

### A NEW MARKETING METHOD

PERSONAL DOMAIN Software is distributed just as Public Domain Software. The disk and program are available at 3A's normal modest charge. However, there is also a software price which you pay direct to the author--not 3A, but only if you decide to use the program! If you only try it and decide not to use it, you don't pay the software price to the author. Instructions and address are found on each PERSONAL DOMAIN software/disk. At press time there are 3 such programs available from 3A: Utility 226 "Diversi-DOS", Utility 229 "One-Key DOS", and Art & Graphic 020 "Sparkee". Here is a brief description of each program.

DIVERSI-DOS reads, saves, loads and writes much faster than normal Apple DOS and it includes a keyboard buffer and a printer buffer routine using your RAM Card. Order UTILITY 226.

ONE-KEY DOS provides single key operation to execute 11 DOS commands plus a quick loader DOS called Zippy. It is compatible with Apple Standard and Diversi-DOS and Apple IIe. Order UTILITY 229.

SPARKEE is the second visual album from Vagabondo. The first is called Fire Organ--Art & Graphic 018. Both are written using the Ceemac Language System--also available from 3A. SPARKEE features works by the 3 artists responsible for Fire Organ, as well as works by four new Ceemac composers. Order ART & GRAPHIC 020. □

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There are 185 Public Domain Volumes as of Aug 1, 1983.

The Mixed Series and the DOS 3.2 Volumes have been discontinued.

TO RUN INTEGER BASIC programs, those preceded with the letter 'I' requires  
an Apple II (Integer BASIC resident in ROM),  
OR  
an Apple II Plus with a 16K RAM Card,  
OR  
an Apple IIe/III.

TO RUN APPLESOFT BASIC programs, those preceded with the letter 'A' requires  
an Apple II with a 16K RAM Card,  
OR  
an Apple II Plus,  
OR  
an Apple IIe/III.

TO RUN PASCAL programs requires  
an Apple II/II Plus with a 16K RAM Card and a set of Pascal Language disks. (An 80 Column Card is recommended.)

TO RUN CP/M disks requires  
an Apple II/II Plus with a CP/M (Z80) Card. (In addition an 80 Column Card and a 16K RAM Card are recommended.)



## Apple Tutor 000

I 005 AAA MESSAGE  
I 004 BASIC PROGRAMMING  
I 036 BASIC PROGRAMMING 1  
I 047 BASIC PROGRAMMING 2  
I 048 BASIC PROGRAMMING 3  
I 044 BASIC PROGRAMMING 4  
A 004 BASIC-INTEGER  
B 022 BASIC-INTEGER.X  
I 019 CONVENTIONS  
I 016 CPU 6502  
I 002 HELLO SAMPLE  
I 030 MICRO 6502 SIMULATION  
I 051 MINI ASSEMBLER TUTORIAL  
A 005 NAKED CITY (C)  
A 022 RANDOM DRILL TUTOR 3.2 ONLY  
I 007 SWEET 16 DISASSEMBLER  
I 004 SWEET 16 SPEED ?  
B 002 SWEET 16 SPEED.X  
I 026 TOP DOWN PROGRAMMING

## Apple Tutor 001

A 005 AAA MESSAGE  
A 021 APPLE II DEMO  
A 004 BASIC EXERCISE  
I 043 BASIC-APPLESOFT  
A 002 BUZZ  
I 093 DISK AIDE  
I 038 DISK AIDE DOCUMENTATION  
B 003 DISK AIDE.X  
A 028 DOS SYSTEM INSTRUCTION  
A 013 PILOT VERSION I  
I 054 PROGRAM DEVELOPMENT PAC (C)  
A 014 SUPPLEMENT MINI ASSEMBLER  
B 006 SUPPLEMENT.X  
I 003 TEXT FILE READ  
I 003 TEXT FILE WRITE  
I 009 TEXT HELLO  
T 009 TEXT HOW TO  
T 010 TEXT INTRO  
T 006 TEXT PEEK POKE CALL  
T 010 TEXT PROGRAMMING  
T 007 TEXT REDBOOK  
T 011 TEXT SOFTWARE

## Apple Tutor 002

A 005 AAA MESSAGE  
A 002 APPLESOFT TUTORIAL (C)  
\*A 023 HELPHelp  
\*B 034 LOGO  
\*A 024 MENUMENU  
\*A 144 PT.1PT.1  
\*A 086 PT.2PT.2  
\*A 108 QREFQREF  
\*A 017 STRTSTR  
\*A 002 HELLO

## Art & Graphic 008

I 005 AAA MESSAGE  
I 009 ART + TONE  
I 014 ART 3D ROTATION  
I 004 ART ACNE  
I 030 ART ALPHABET 2  
I 003 ART BIT BIN 1  
I 008 ART BIT BIN 2  
I 004 ART COLOR EATER  
I 005 ART CRAZY  
I 010 ART CURVES  
I 009 ART DEMO 1

I 018 ART DRAW A FACE  
I 034 ART DRAW LETTERS  
I 008 ART EGG  
I 002 ART EGG DOC  
I 012 ART FACES  
I 004 ART KALEIDOSCOPE 1  
I 021 ART LIFE ARENA  
I 004 ART LINES  
I 003 ART MAGIC QUILT  
I 002 ART MODERN LINES  
I 003 ART MOSIAC CROSS  
I 006 ART MUSIC CLOSE ENCOUNTER  
I 009 ART NATL PRIDE 1  
I 006 ART NUMBERS  
I 006 ART PLAID LOOP  
I 007 ART PLOTTING  
I 002 ART RANDOM LINES  
I 004 ART RIGHT ANGLES  
I 009 ART ROM THE ROBOT  
I 002 ART SQUARES  
I 017 ART TAPESTRY  
I 002 ART TWINE 1  
I 008 ART TWINE 2  
I 002 ART TWINE DOC  
I 004 ART WINDOW  
I 005 ART WORM->NEEDS WORK  
I 006 CLOCK 1  
I 007 CLOCK 2 WEINSTOCK  
I 009 CLOCK 4 MASSIMO  
I 013 CLOCK 5 COHN  
B 006 HIRES GR MESSAGE (C00.3FF)  
B 018 HIRES GR MESSAGE (C00.FFF)  
I 018 HIRES GR MESSAGE->NEEDS WORK  
I 006 JOYSTICK ?  
I 002 MEMORY ORGANIZATION  
I 005 TV CONVERGENCE  
I 008 TV PATTERN GENERATOR

## Art & Graphic 009

I 005 AAA MESSAGE  
I 008 ART 2 CIRCLES  
I 019 ART ALPHABET 1  
I 022 ART ANIMATIONS  
I 002 ART BEEP SQUARES  
I 033 ART BIRTHDAY  
I 011 ART DEMO 2  
B 006 ART DEMO 2.X  
I 017 ART DEMO 4->NEEDS WORK  
I 050 ART HOLIDAYS  
I 012 ART KINESIS->NEEDS WORK  
I 012 ART PAK 3  
I 014 ART PLOT CONTOURS  
I 038 ART SAMPLER  
I 010 ART SKETCH  
B 010 ART SKETCH.X  
I 009 ART XMAS 1  
I 030 ART XMAS 2  
I 040 HIRES SUBROUTINES ?  
I 008 PAGE 1 AND 2  
I 040 POSTER SNOOPY FOOTBALL

## Art & Graphic 010

A 005 AAA MESSAGE  
A 004 ART 3D HYPERBOLOID  
A 002 ART BITS  
A 005 ART BOUNCING BALL  
A 011 ART COLOR BAR  
A 002 ART COLOR PATTERN  
A 006 ART DAY->NEEDS WORK  
A 015 ART DISPLAY

A 012 ART DRAW  
A 015 ART DRAW SHAPES  
A 009 ART DRAW SHAPES ADDER  
A 018 ART DRAW SHAPES WITH &  
A 012 ART ENTERPRISE  
B 034 ART ENTERPRISE.X  
A 004 ART FLOWERS  
A 014 ART FLUTTER BY  
B 010 ART FLUTTER.W  
B 005 ART FLUTTER.X  
B 005 ART FLUTTER.Y  
B 034 ART FLUTTER.Z  
A 009 ART GIFTED  
A 004 ART HORIZ BARS  
A 003 ART HYPER I  
A 006 ART HYPER II  
A 002 ART ILLUSION  
B 011 ART ILLUSION.X  
A 002 ART IMPACT  
A 003 ART KALEIDO KEYS  
A 004 ART KALEIDO SHAPE  
A 002 ART KALEIDOSCOPE  
A 005 ART MANDALA  
A 003 ART METER  
A 003 ART MULTICOLOR I  
A 004 ART PACIFIER  
A 005 ART PATTERN BW  
A 004 ART PLAIDS  
A 012 ART POLYGONS  
A 002 ART QUILT  
A 003 ART RADAR  
A 003 ART ROSE SUPER  
A 006 ART RUBBER ROSE  
A 003 ART SINEWAVE  
A 005 ART SPIRO I  
A 002 ART STRIPES  
A 007 ART SUPER PLUS  
A 002 ART THEME I  
A 002 ART THEME II  
A 003 ART THEME III  
A 004 ART THEME IV  
A 003 ART THEME V  
A 002 ART TRIANGLE  
A 009 ART VALENTINE  
A 002 ART WINDOWS  
A 004 JOYSTICK  
A 002 PICTURE LOADER  
A 009 POSTER  
A 017 POSTER BANNER II  
A 006 POSTER BUNNY

## Art & Graphic 011

I 005 AAA MESSAGE  
I 018 ART APPLE LOGO  
I 006 ART APPLEGRAPHICS  
I 005 ART BUTTERFLIES  
I 003 ART COLOR SHOW  
I 002 ART DAZZLER  
B 003 ART DAZZLER.X  
I 003 ART DOTS OR LINES  
I 007 ART DRAWING  
I 007 ART GRA SPEED  
I 003 ART GRAPHIC  
I 003 ART KOFINOFF  
I 008 ART MODERN PAINTING  
I 003 ART MOSIAC  
I 015 ART NATL PRIDE 2  
I 002 ART PLAID COLORS  
I 010 ART ROCKET  
I 009 ART SHAPE BUILDER  
B 006 ART SHAPE BUILDER.X  
I 006 ART SNOWFLAKES  
I 017 ART VARIATIONS

I 005 ART WALLS  
I 004 ART WORM  
I 006 BAR GRAPH  
I 002 BILLBOARD  
I 007 CAR ANIMATION  
I 008 CLOCK 3 MASSIMO  
I 014 CLOCK 6 TARNOFF  
I 020 DOODLE  
B 002 DOODLE.X  
I 050 HOLIDAY PAK  
I 018 LINCOLN  
I 002 LINCOLN-NEED HIRES END  
B 006 LINCOLN.X  
I 003 PULSAR  
B 010 PULSAR.1  
B 010 PULSAR.2  
B 010 PULSAR.3  
B 010 PULSAR.4  
B 010 PULSAR.5  
B 010 PULSAR.6  
B 010 PULSAR.7  
B 010 PULSAR.8  
I 010 VIDEO TEST  
I 011 WASHINGTON  
I 002 WASHINGTON-NEED HIRES END  
B 006 WASHINGTON.X

## Art & Graphic 012

A 005 AAA MESSAGE  
A 023 ART 3D EXTRAVAGANZA  
A 004 ART 3D PLOT AND SAVE  
A 012 ART 3D PROJECTIONS  
A 050 ART APPLE  
A 013 ART APPLE CORPS  
A 004 ART APPLE ROSE  
A 005 ART CIRCLES  
A 004 ART CIRCLES AND PDLS  
A 002 ART DAZZLE  
B 003 ART DAZZLE.X  
A 005 ART FLIP IT  
B 034 ART FLIP IT.X  
A 002 ART HERRINGBONE  
A 002 ART HERRINGBONES  
A 002 ART HONEYCOMBS  
A 003 ART HYPER III  
A 003 ART HYPER IV  
A 003 ART HYPER V  
A 005 ART IMPOSSIBLE  
A 002 ART ONE LINER I  
A 002 ART ONE LINER II  
A 003 ART PERSPECTIVE->NEEDS WORK  
A 003 ART PLAY  
A 009 ART RANDOM WALK  
A 002 ART ROSE PLASTIC  
A 003 ART SHAPES  
A 002 ART SPIRAL I  
A 003 ART SPIRAL II  
A 006 ART SPIRO II  
A 006 ART STRING  
B 034 ART STRING.1  
A 002 ART SUNBURST  
A 015 ART XMAS SCENE  
A 002 BILLBOARD ROUTINE  
A 016 CLOCK GRANDFATHER  
A 006 GRAPH I  
A 009 GRAPH II  
A 007 GRAPHING  
A 006 POSTER LOVE I  
A 020 POSTER NCSU WOLF  
A 040 POSTER PIZZA MAN  
A 015 SPACE FILLING CURVES

## Art & Graphic 015

I 005 AAA MESSAGE  
I 002 ART DISPLAY COLORS  
B 002 ART DISPLAY COLORS.X  
I 012 ART WINDMILL  
I 002 CONTOURS  
B 034 CONTOURS.1  
B 034 CONTOURS.10  
B 034 CONTOURS.11  
B 034 CONTOURS.2  
B 034 CONTOURS.3  
B 034 CONTOURS.4  
B 034 CONTOURS.5  
B 034 CONTOURS.6  
B 034 CONTOURS.7  
B 034 CONTOURS.8  
B 034 CONTOURS.9  
A 002 PICTURE LOADER

## Art & Graphic 016

A 005 AAA MESSAGE  
A 006 ART ALIGN  
A 002 ART BARS  
A 003 ART CIRCLE  
A 002 ART DEMO  
A 003 ART DIVERGING CIRCLES  
A 003 ART DIVERGING OCTAGONS  
A 003 ART DOUBLE CROSS  
A 006 ART DOUGS THEME  
A 003 ART DRIFTING CIRCLE  
A 003 ART DRIFTING OCTAGON  
A 004 ART ELEPHANT  
A 003 ART FIGURE EIGHT  
A 005 ART HORIZON  
A 007 ART IBM  
A 003 ART OCTAL EIGHT  
A 002 ART ONELINER VII  
A 004 ART SPACE  
A 007 ART SUPER KALIED  
A 003 ART TWIST II  
A 015 ART XMAS CARD  
A 014 AUTO SPACE WAR II  
A 002 BILLBOARD MOTHER  
A 002 GRAPHIC SWITCH  
A 010 GRAPHICS TABLET  
A 008 HI-RES TEXT DEMO ?  
B 007 HI-RES TEXT SET  
A 004 HIGHER HIRES  
A 006 HIRES SKETCH  
A 003 INVERT MONITOR MODE  
A 035 LIFE  
B 015 LIFE LANGUAGE  
A 004 LIFE LEADER  
A 002 PICTURE LOADER  
A 016 PLOT POURRI  
A 010 POSTER ?  
A 008 POSTER BANNER I  
A 009 POSTER LOVE II  
A 003 RUBBER APPLE  
A 020 SHAPE EDITOR  
A 010 SHAPE GENERATOR  
A 003 SHAPE INSTR  
A 023 SHAPE TABLE EDITOR  
T 001 SHAPE TABLE FOR HIRES LABELS  
T 002 SHAPE TEST  
A 015 SKYWRITER  
A 003 SKYWRITER I  
A 003 SKYWRITER II  
A 025 SKYWRITER INSTR  
A 013 SKYWRITER SNOOPY  
B 018 STAR SHAPE  
A 005 TV PATTERN GENERATOR

## Art & Graphic 013

I 005 AAA MESSAGE  
I 013 ART DEMO 3  
I 005 ART KALEIDOSCOPE 2  
I 005 ART LADY BUG  
I 006 ART MOOSE  
I 002 ART ONE LINER  
A 002 ART ONELINER 11  
I 011 ART PARROT  
I 004 ART RAT  
I 007 ART SLIDE SHOW  
B 033 ART SLIDE.V  
B 036 ART SLIDE.W  
B 033 ART SLIDE.X  
B 033 ART SLIDE.Y  
B 034 ART SLIDE.Z  
I 024 ART TRAINS  
A 003 ART TRIANGLES  
I 007 INSPIRATION  
B 007 INSPIRATION.X  
B 098 INSPIRATION.Y  
A 002 PICTURE LOADER  
I 014 POSTER SNOOPY  
I 015 TYPE CHARACTERS ?

## Art & Graphic 014

A 005 AAA MESSAGE  
A 003 ART BOX PADDLES  
A 002 ART BOXES  
A 003 ART BOXES 3D  
A 005 ART BY BEN  
A 003 ART CURVES  
A 003 ART FIREWORKS  
A 004 ART IDIOT DELIGHT  
A 020 ART JUMP  
A 003 ART LINES  
A 004 ART MULTICOLOR II  
A 007 ART STARS  
A 007 ART TESSERECT  
A 003 ART TRIANGLE ILLUSION  
A 003 ART TWIST I  
A 015 AUTO SPACE WAR I  
A 026 BARN 3D  
A 016 CHARACTER TABLE GENERATOR  
A 002 CHARACTER TABLE NOTE  
B 003 CHARACTER TABLE.X  
B 010 CHARACTER TABLE.Y  
B 002 CHARACTER TABLE.Z  
A 004 DOLLAR COPY  
B 003 DOLLAR COPY.?  
B 002 DOLLAR COPY.X  
B 034 DOLLAR COPY.Y  
A 015 PIE CHART I  
A 015 PIE CHART II  
B 003 PIE CHART.X  
B 006 PIE CHART.Y  
A 015 POSTER BANJO->NEEDS WORK  
A 012 POSTER SNOOPY  
A 010 SAVE A SKETCH  
A 023 SHAPER  
A 018 SHAPER INSTRUCTIONS  
A 002 STAR SHIP  
B 034 STAR SHIP.X  
B 034 STAR SHIP.Y  
A 017 SURFACE 3D



### Art & Graphic 017

I 003 AAA ART & GRAPHIC 017  
I 005 AAA MESSAGE  
I 008 ART BEGINNING  
I 013 ART ENTERPRISE  
I 012 ART HYPNOTIZER  
I 006 ART MERRY XMAS  
I 005 ART TIME TUNNEL  
I 036 BILL BUDGE 3D DEMO  
I 022 HIRES PAK 1  
I 022 HIRES PAK 2  
B 026 MODULE.DEMO  
I 018 SHAPE MAKER

### Art & Graphic 018

A 005 AAA MESSAGE  
B 040 ABOUT ARTHUR  
B 020 ABOUT BROOKE BOERING'S SCORES  
B 022 ABOUT CEEMAC  
B 016 ABOUT FISHTANK  
B 034 ABOUT JP McMILLAN'S SCORES  
B 024 ABOUT VAGABONDD  
B 034 ABOUT W. MIKE BENDIK'S SCORES  
I 002 APPLESOFT  
B 030 CEEHI  
B 018 CELO  
A 002 FIRE ORGAN (C)  
A 002 HELLO  
B 034 HIRES  
B 009 PATTERN 1  
B 009 PATTERN 2  
B 009 PATTERN 3  
B 009 PATTERN 4  
B 009 PATTERN 5  
B 027 PDOC  
B 015 PRODUCT ANNOUNCEMENT  
B 038 SCORES  
B 014 SHAPES  
A 005 START.A  
I 005 START.I

### Art & Graphic 019

B 004 AMPER  
A 009 ANNOUNCEMENTS  
A 026 CAT-GRAPHIX  
B 034 CAT.FIC  
A 008 CHAR-EDIT 3  
A 002 CIRCLES 1  
A 003 CIRCLES 1B  
A 003 CIRCLES 1C  
A 002 CIRCLES 2  
A 002 CIRCLES 4  
A 002 CLEAR DEMO  
A 002 COLORED BOXES 1  
A 002 COLORED BOXES 3  
B 002 DEMO CHARS  
A 006 DEMOS!  
T 048 DOCUMENT  
A 003 DOCUMENTATION  
A 000 DRAWIT  
B 014 EDIT.DBJ  
B 002 GRAFYX  
B 025 GRAPHIX II  
A 003 HI-RES DAZZLER  
A 005 KALEID 4  
A 002 KINETIC 1  
A 002 KINETIC 2

A 034 LINESET EDITOR  
A 003 LO-RES DAZZLER  
B 003 LORES  
A 002 MESSY CIRCLES  
B 005 01.4  
B 005 02  
B 008 08.1  
B 008 08.2  
B 002 OILER  
A 002 PATTERN  
A 004 QUIXOTIC 1  
A 004 QUIXOTIC 3  
A 004 S2  
A 002 SEA OF GREEN  
B 003 SERENDIPITOUS  
A 003 SERENDIPITY  
B 002 SPIN  
A 003 SPIN DEMO  
A 002 SQUARE 4  
A 002 SQUARE 5  
A 003 STAINED GLASS  
B 002 STUFF  
A 005 TABLE MAKER  
A 013 UPGRADE  
T 027 XAMPER  
T 097 XGRAPHIX II  
B 006 YZ  
B 006 YZ3

### Art & Graphic 020

A 002 SPARKEE  
B 020 @CEEMAC  
B 010 @CEEMAC SUPPORT  
B 028 @LINER NOTES  
\*I 002 APPLESOFT  
B 013 AUDREY  
B 015 BOOTUP  
B 026 CEEHI  
B 026 CELO  
A 002 HELLO  
B 033 HIRES  
\*B 002 MVFF  
B 033 PDOC  
B 043 SPARKEE  
A 006 START.A  
I 005 START.I

### Art & Graphic 021

\*A 121 UNOBD X  
\*A 003 COLOR TEST 2  
\*A 007 WAVES  
\*T 002 BFS  
\*T 002 STARTER  
\*A 002 MESSAGE  
\*A 003 EXEC PRO 4 AL  
\*A 002 EXEC PRO 4 START  
\*B 034 FAUVE AL  
\*B 034 FAUVE AL A  
\*B 034 FAUVE AL B  
\*B 034 FAUVE AL #2  
\*B 034 FAUVE AL #3  
\*B 034 FAUVE AL #4  
\*B 034 FAUVE AL #5  
\*B 034 GRID AL  
\*B 034 AL REDEFINED  
\*B 034 AL SPEAKS  
\*T 002 START 1

### Astronomy 028

A 005 AAA MESSAGE  
A 022 ASTRONOMY EXPOSURES  
I 028 ASTRONOMY TUTOR  
A 006 CALENDAR MOON AGE  
A 011 EPHEMERIS  
A 060 GREAT CIRCLE BEARINGS  
A 014 JUPITER MOONS  
B 002 JUPITER.X  
B 018 JUPITER.Y  
A 018 MOON FINDER  
A 025 OSCAR  
A 011 OSCAR ORBIT PERIODS  
A 031 OSCARLOCATOR  
\*T 003 OSCARLOCATOR FILE  
A 009 OSCARLOCATOR FILE INIT  
A 019 OSCARLOCATOR INSTRUCTIONS  
A 024 PLANET LOCATOR  
B 002 PLANET LOCATOR.X  
B 010 PLANET LOCATOR.Y  
A 018 SUNRISE AND SET  
A 023 URSA STAR TIME

### Astronomy 029

A 005 AAA MESSAGE  
T 044 SATELLITE AO-7  
T 044 SATELLITE AO-B  
A 014 SATELLITE CALENDAR  
A 021 SATELLITE COMMON VIEW  
T 009 SATELLITE DATA  
A 006 SATELLITE DATA READER  
A 036 SATELLITE DATA->NEEDS WORK  
A 028 SATELLITE ELLIPTICAL ORBIT  
A 019 SATELLITE POINTING  
A 026 SATELLITE REAL TIME

### Aviation 034

A 005 AAA MESSAGE  
A 005 AIRCRAFT DATABASE  
T 002 BASENAMEFILE  
T 007 COMMERCIAL AIRCRAFT  
T 007 COMMERCIAL AIRCRAFT INDEXFILE  
A 040 FILE CABINET IV  
T 006 GENERAL INFORMATION  
T 010 MODERN COMBAT AIRCRAFT  
T 006 SAILPLANES  
T 003 SAILPLANES HEADERFILE  
T 016 SAILPLANES INDEXFILE  
T 006 SINGLE ENGINE AIRCRAFT  
T 006 WW II BOMBER AIRCRAFT  
I 007 WW II FIGHTER AIRCRAFT

### Aviation 035

A 005 AAA MESSAGE  
I 019 AIRCRAFT CATALOG  
A 032 AIRCRAFT PERFORMANCE  
A 007 AIRCRAFT SLIDE SHOW  
B 033 COMMERCIAL AIRCRAFT  
B 033 FOREIGN FIGHTERS  
B 033 GENERAL AVIATION  
B 033 HOMEBUILT AIRCRAFT  
B 033 MODERN US FIGHTERS  
A 008 RNAV GLIDE SLOPE  
B 002 SILENTYPE HIRES DUMP  
A 004 SLIDE SHOW TO SILENTYPE  
B 033 US BOMBERS  
B 033 US JET FIGHTERS  
B 033 US WW II FIGHTERS

### Business & Finance 042 Business & Finance 045 Business & Finance 047

A 005 AAA MESSAGE  
A 005 ANNUITY PRINCIPAL & INTEREST  
A 005 ANNUITY REGULAR DEPOSITS  
A 003 ANNUITY->NEEDS WORK  
A 018 BOND PRICE & INTEREST  
A 013 BOND VALUE  
A 012 BUDGET MONTHLY  
A 013 DECISION MATRIX  
A 054 FINANCIAL PAK  
A 016 INVESTMENT ANNUITY FORECASTS  
A 012 KEOGH SAVINGS PROGRAM  
A 014 LOAN AMORT SCHEDULE  
A 008 LOAN DIRECT REDUCTION  
A 004 LOAN INTEREST  
A 029 MARKET EVALUATOR PAK  
A 009 MORTGAGE CALCULATION  
A 007 NICER WRITER->NEEDS WORK  
A 003 REGULAR DEPOSITS I  
A 007 SALES TAX AT 6%  
A 017 SECURITY ANALYSIS  
A 006 SECURITY ANALYSIS COPY DATA  
A 003 SIMPLE INTEREST  
A 010 STOCK OPTION ANALYSIS  
A 016 STOCK OPTION COVERED HEDGE  
A 015 STOCK OPTION PRICING I  
A 021 STOCK OPTION PRICING II  
A 008 STOCK PORTFOLIO VALUATION  
A 028 STOCKS  
A 010 TRIP COST ANALYSIS

### Business & Finance 043

I 005 AAA MESSAGE  
I 030 CALENDAR PERSONAL  
I 006 LETTER WRITER  
I 006 LETTER WRITER ENHANCE  
I 014 PHONE LIST  
I 005 REAL ESTATE PLOT  
B 034 REAL ESTATE PLOT.X  
A 012 STOCK MONITOR I  
A 015 STOCK MONITOR II  
A 024 TREND LINE ANALYSIS  
A 006 VISICALC COORD FORMULAS  
A 012 VISICALC D FILE PRINTER  
A 014 VISICALC FORMULAS  
A 006 VISICALC FORMULAS INSTR

### Business & Finance 044

A 005 AAA MESSAGE  
A 025 APARTMENT MORTGAGE  
A 052 BANKING AND FINANCE  
A 058 BUSINESS FINANCE  
A 006 CHECK STUB  
A 020 HOUSEHOLD EXPENSES PROFILE  
A 041 INCOME TAX 1040 FOR 77  
A 029 INVENTORY COMPANY  
A 004 INVENTORY COST FILE ENTRY  
A 016 INVENTORY HOME I  
A 022 INVENTORY MODEL  
A 009 INVENTORY PRINT->NEEDS WORK  
A 003 INVENTORY SHORTEST  
A 003 INVENTORY SHORTEST READ  
A 023 INVENTORY.  
A 003 INVENTORY.DOC  
A 019 INVENTORY.FILE CREATE  
A 029 INVENTORY.FILE READ  
A 018 STOCK MARKET FORECASTER  
A 011 STOCK VALUATION

A 005 AAA MESSAGE  
A 004 ANNUITY  
A 004 AVERAGE GROWTH RATE  
T 001 BASENAMEFILE  
A 046 CAC RECORD SYSTEM->NEEDS WORK  
A 009 CHECK BOOK BALANCER  
A 008 CHECK WRITER  
A 004 DEPRECIATION AMOUNT  
A 003 DEPRECIATION RATE  
A 010 DEPRECIATION SCHEDULES  
A 003 DEPRECIATION STRAIGHT  
A 004 DISCOUNT COMMERCIAL PAPER  
A 024 HOUSE SALES  
A 005 INCOME TAXES  
A 012 INTEREST EARNED  
A 003 INTEREST RATE  
A 038 INVENTORY HOME II  
A 004 INVESTMENT FOR WITHDRAWALS  
A 004 INVESTMENT FUTURE VALUE  
A 004 INVESTMENT INITIAL  
A 013 LEASE COMPUTATION  
A 031 LIFE MGMT AND FINANCES  
A 012 LIFE MGMT TEXT ORGANIZER  
A 005 LOAN BALANCE  
A 007 LOAN INTEREST RATE  
A 005 LOAN LAST PAYMENT  
A 004 LOAN PRINCIPAL  
A 005 LOAN REGULAR PAYMENT  
A 004 LOAN TERM  
A 004 MORTGAGE COMPUTER  
A 007 MORTGAGE TABLE  
A 063 PAYROLL  
A 004 REGULAR DEPOSITS II  
A 003 REGULAR WITHDRAWALS  
A 004 SALVAGE VALUE  
A 009 SAVINGS GROWTH  
A 011 SURVEY DATA REDUCTION  
A 003 SYSTEM RELIABILITY  
A 004 TREASURY BILL VALUATION

### Business & Finance 046

A 005 AAA MESSAGE  
A 013 ADDRESS FILE  
A 012 AMORTIZATION SCHEDULE PRINTED  
A 013 AMORTIZATION SCHEDULE SCREEN  
T 002 BORK.INV  
T 003 BORK.OFF  
T 003 COMP.INV  
A 009 COMPOUND INTEREST TABLES  
A 008 ELLWOOD GRAPH POINTS  
A 009 ELLWOOD GRAPH POINTS PRINTED  
A 029 FILE MANAGER  
B 003 FILE MANAGER.X  
A 018 HOME ACCOUNTING  
A 010 INCOME APPROACH PRINTED  
A 025 INCOME APPROACH RATE PRINTED  
A 011 INCOME APPROACH SCREEN  
A 049 INCOME TAX  
A 021 INVENTATOR  
T 002 INVENTATOR.INV  
A 014 NAMES SEARCH  
A 015 NET PRESENT VALUE  
A 015 NET PRESENT VALUE IRR  
A 008 NPV % CHANGE INCOME  
A 008 NPV % CHANGE INCOME IRR  
A 008 NPV % CHANGE INCOME PR  
A 012 OVERALL RATE PRINTED  
A 008 OVERALL RATE SCREEN  
A 013 PAYMENT SCHEDULE  
A 006 TAX DEPRECIATION SCHEDULE

A 005 AAA MESSAGE  
A 010 ALL ACCOUNTS  
A 010 BILLS  
A 005 CLEAN UP  
T 003 COMPANY  
A 028 DATA BASE  
A 028 FILE CABINET I  
A 029 FILE CABINET II  
A 038 FILE CABINET III  
A 040 FILE CABINET IV  
A 015 INDIVIDUAL ACCOUNTS  
T 002 JOBWORK  
A 008 NEW  
A 003 NOMINAL INTEREST RATE  
A 012 PAY  
T 001 PFILE  
A 003 PRINT ALL ENTRIES FOR 1 #  
A 012 PROPERTY MORTGAGE  
T 009 REC  
A 011 STATEMENT INVOICE  
A 002 UTILITY TO WRITE BLANK PFILE  
A 003 UTILITY WRITE EMPTY DISK

### Business & Finance 048

A 005 AAA MESSAGE  
B 004 ALPHA#  
A 022 APPLE FILE (C)  
A 007 BUDGET ANALYZE  
A 008 BUDGET EDIT  
A 014 BUDGET INPUT  
A 012 BUDGET PLOT  
A 005 BUDGET TRACKER INSTR  
B 006 CARD1  
B 006 CARD2  
B 006 CARD3  
B 006 CARD4  
B 006 CARD5  
B 006 CARD6  
B 006 CARD7  
B 006 CARD8  
B 006 CARD9  
A 018 CHECK BOOK  
A 010 CHECK BOOK INSTR  
B 002 CHECK BOOK.X  
A 021 FAMILY FINANCE (C)  
T 004 G/L DATA  
A 041 GEN LEDGER  
A 031 GEN LEDGER PRINTER  
B 038 HOUSE BUDGET  
T 003 HOUSE STRINGS  
T 004 INDEX  
A 041 MATRIX MAKER  
T 003 MM-TEST  
T 003 TEST.DAT  
A 002 TEXT FILE READER  
A 013 TITLE SLIDES

### Business & Finance 049

A 005 AAA MESSAGE  
A 002 A DATA BASE MGMT PGM (C)  
T 045 CONSTAR  
A 033 CREATE.ADD  
T 002 CURRENTFILE  
A 029 DISK TO TAPE TRANSFER  
A 033 EDIT.FILE  
A 038 HELP  
A 052 MERGE  
I 018 PGM TRANSFER 1  
I 018 PGM TRANSFER 2  
I 006 PGM TRANSFER INSTRUCTIONS  
A 051 SEARCH.SORT  
B 003 SPLIT CAT  
A 035 TRANS.COPY



**Chemistry & Biology 060**

A 005 AAA MESSAGE  
A 005 BATTERY DEMO  
A 010 CIRCULAR DICHROISM  
I 039 D N A  
A 017 ELEMENTS TABLE  
A 054 ENZYME KINETICS  
A 021 MOLALITY  
A 022 MOLE  
A 019 MOLECULES OF C H O  
I 016 MOLECULES OF CARBON  
B 006 MOLECULES OF CARBON.X  
B 003 MOLECULES OF CARBON.Y  
B 034 RADIO  
A 011 RADIOACTIVE  
A 003 TEST MAKER  
A 006 TEST TAKER  
T 017 TEST.CHEM CH2  
T 001 TEST.CHEM COMPOUNDS  
T 005 TEST.CHEM NAMES  
T 008 TEST.IONS

**Demonstration 064**

A 005 AAA MESSAGE  
A 015 AIRCRAFT ID DEMO (C)  
B 002 AIRCRAFT ID.X  
B 010 AIRCRAFT ID.Y  
B 002 AIRCRAFT ID.Z  
A 008 BEAGLE BROS DEMO (C)  
I 036 BILL BUDGE 3D DEMO  
A 009 DEMO MENU  
A 027 DOS BOSS DEMO  
B 026 MODULE.DEMO  
A 028 SLIPPERY DIGITS DEMO  
B 034 TALKING HEADS #1  
B 034 TALKING HEADS #2  
A 016 TEXTTRAIN DEMO  
A 030 WOWNO DEMO

**Education & School 066**

A 005 AAA MESSAGE  
I 026 ALPHABET & SOUND  
A 004 CLASS BOY GIRL RATIO  
A 030 CLASS GRADE BOOK  
A 038 CLASS GRADER  
A 004 CLASS GRADER INITIALIZE  
A 015 FINAL GRADE  
A 004 FINAL GRADE DOC  
A 014 FOURTH GRADE DEMO  
I 007 LETTER DISCRIMINATION  
I 006 SPELL ING  
A 016 STUDENT GRADE AVERAGE  
A 022 STUDENT HEAD COUNT  
A 004 STUDENT HEAD COUNT DOC  
I 010 TEST IN WOODWORKING  
A 042 TEST MAKER  
A 019 TEST MAKER MULTI CHOICE  
I 013 TYPING PRACTICE  
A 016 TYPING PRACTICE->NEEDS WORK  
A 005 X-AVERAGES  
A 003 X-DATE  
T 002 X-E.FILE  
T 002 X-FILE  
A 005 X-FILE INIT  
I 009 X-GRADING INSTR  
I 002 X-INTRO NEEDED  
I 002 X-SCHOOL MENU NEEDED  
B 048 X-SCHOOL1  
I 002 X-SCHOOLFILE  
A 005 X-STUDENT NAMES  
A 005 X-STUDENT NAMES GRADES  
A 004 X-TEST GRADES

**Education & School 067**

A 005 AAA MESSAGE  
A 005 ANSWER SHEET  
A 005 BELL SCHEDULE  
T 001 CHEM GR EXAM.  
T 005 CHEM GR EXAM.CHEM GR EXAM.  
A 017 CHEM GRADER  
A 004 FILE START C-G  
T 001 G-G EXAMLEG-G EXAMPLE  
A 009 READING DRILL  
A 004 TEST APPEND  
A 003 TEST APPEND I  
A 003 TEST MAKER  
A 006 TEST TAKER  
T 005 TEST.CHEM NAMES

**Electronic & Radio 074**

I 005 AAA MESSAGE  
T 003 MORSE CODE DATA  
I 007 MORSE CODE DRILL  
T 002 MORSE CODE EXEC  
I 006 MORSE CODE EXEC WRITER  
I 033 MORSE CODE FLASH  
A 015 MORSE CODE INTERPRETER  
I 011 MORSE CODE PRACTICE  
I 007 MORSE CODE READER  
I 007 MORSE CODE RECEIVE  
I 015 MORSE CODE SEND ALPHANERIC  
I 015 MORSE CODE SEND CHARACTERS  
I 017 MORSE CODE SEND MESSAGE  
A 009 MORSE CODE SENDER  
I 007 MORSE CODE TEACHER  
A 046 MORSE CODE TEACHER KELTZ  
I 016 MORSE CODE TRAINER  
I 028 MORSE CODE TRUSTY  
A 026 MORSE CODE TUTORIAL  
I 005 MORSE CODE WRITER

**Electronic & Radio 075**

I 005 AAA MESSAGE  
T 062 BBS  
I 006 MODEM ALARM CLOCK  
A 045 MODEM AUTO DIALER  
A 017 MODEM CHESSE  
I 007 MODEM DEMO 1  
I 007 MODEM DEMO 2  
I 006 MODEM DUMB TERMINAL  
A 004 MODEM HELLO  
A 008 MODEM PASSWORD  
A 004 MODEM PHONE PICKUP  
A 013 MODEM PROGRAM EXCHANGE  
I 006 MODEM SELF TEST  
I 007 MODEM SELF TEST PROGRAM  
I 008 MODEM STORE FORWARD  
A 005 MODEM TEXT FILE TRANSFER  
I 002 MODEM.  
B 002 MODEM.ORIGINAL  
B 002 MODEM.X  
A 003 TEXT FILE READ AND PRINT I

**Electronic & Radio 076**

A 005 AAA MESSAGE  
A 096 DXCC DEMATTIA  
T 059 DXCC FILE  
A 016 DXCC GAME WITH PRINTER  
A 043 DXCC WAGNER  
A 013 ELCT CALCULATOR I  
A 011 FILTER NOTCH  
A 014 LIGHTING LIFE CYCLE  
A 015 LOG AMATEUR RADIO  
A 023 MAP PROJECTIONS  
A 010 REACTANCE CALCULATIONS  
A 006 RESISTOR COLOR CODE DECODER  
A 008 RESISTOR COLOR CODE QUIZ  
A 011 TOWER GUY WIRE LENGTHS  
A 005 TRANSISTOR PARAMETERS  
A 014 WAS RECORDS  
A 011 WAZ RECORDS

**Electronic & Radio 077**

A 005 AAA MESSAGE  
A 026 ADDRESS BOOK  
T 001 CODE DATA  
A 029 DUPE CONTEST  
A 009 DUPE FINDER  
B 002 DUPE FINDER.X  
A 007 DUPE SHEET  
B 002 DUPE SHEET.X  
B 026 DUPE SHEET.Y  
A 009 HAM CLUBS  
A 007 HAM LOG 10X  
A 019 HAM LOG MASSIMO  
A 012 HAM LOG ZAPPALA I  
A 015 HAM LOG ZAPPALA II  
A 020 LOADED DIPOLE DESIGN  
T 002 LOG BOOK  
A 047 LOG BOOK 1.1  
A 008 LOG BOOK 1.1 INSTR  
T 002 LOG BOOK COMMENTS  
A 002 LOG BOOK NEW START  
B 003 LOG BOOK.X  
A 014 LOG NET CONTROL  
A 070 PHONE DIRECTORY  
B 034 RTTY INTERFACE.PIC  
A 002 RTTY PICTURE LOADER

**Electronic & Radio 078**

A 005 AAA MESSAGE  
A 004 ANTENNA HEIGHT  
A 003 ANTENNA LENGTH  
A 005 ANTENNA PLOT  
A 013 CONDUIT FILL  
A 004 DAY DEDUPER  
A 062 ELCT CALCULATOR II  
A 019 ELCT FORMULAS  
A 022 ELCT PAK  
A 094 ELCT ZBARS  
A 015 ELECTRIC RATE PLAN  
A 014 ELECTRICITY CONSERVATION  
A 004 FILTER BAND PASS ACTIVE  
A 004 FILTER HI PASS ACTIVE  
A 003 FILTER LO PASS ACTIVE  
A 003 FILTER LO PASS LC  
A 003 HAM FORMULA  
A 004 INTERMOD LOCATOR  
A 013 L NETWORK DESIGN

007 NOISE BRIDGE CALCULATOR  
006 OHMS LAW  
006 OHMS LAW FORMULA  
006 PI NETWORK DESIGN I  
009 PI NETWORK DESIGN II  
005 POWER SUPPLY AND FILTER  
012 QSL CARD  
010 QUAD ANTENNA DESIGN I  
018 QUAD ANTENNA DESIGN II  
005 RESISTIVE T PI ATTENUATORS  
002 SWR CALCULATOR  
006 TIMER DESIGN  
005 TRANSISTOR AMP CALCULATOR  
003 VHF SIGNAL DEFRACTION  
003 VSWR FROM POWER

**Electronic & Radio 079**

005 AAA MESSAGE  
005 HAM LOG STATION  
006 INPUT AMPLIFIER  
009 LOGIC ANALYSIS  
029 LOGIC ANALYZER  
014 LOGIC CIRCUIT ANALYSIS  
009 QSL FILE

**Food 092**

005 AAA MESSAGE  
004 ALPHA#  
026 CALORIE COUNTING PROGRAM  
014 CALORIE RMTS  
029 FOOD VALUES  
033 IDEAL BODY WEIGHT  
031 LIFE EXPECTANCY  
026 LIFE EXPECTANCY TEST  
017 METRIC KITCHEN  
043 RECIPE BOX  
002 INDEXRECIPE FILE  
002 RECIPE FILE  
042 RECIPE CALORIE COST  
003 RECIPE COST  
026 RECIPE COST PER SERVING

**Game 100**

005 AAA MESSAGE  
027 BLACKJACK STRATEGY  
012 COMBAT  
017 CRAPS BW  
035 CRIBBAGE I BW  
028 FOOTBALL PREDICTIONS  
003 FOOTBALL PREDICTIONS.NOTE  
011 FOX AND HOUNDS  
026 FRENCH MILITARY GAME  
020 GOLD MINE  
022 GOLF II  
016 HI Q  
027 HOCKEY I  
021 HORSE RACE III  
031 KINGDOM  
008 LITERATURE QUIZ  
026 MAROONED IN SPACE  
004 PING PONG  
010 ROBOT BW  
016 SURVIVE  
018 TWONKY I  
018 WORD MAZE MAKER

**Game 101**

I 005 AAA MESSAGE  
I 045 BOWLING 2  
B 016 BOWLING.X  
I 007 CARD TRICK 1  
I 013 CARD TRICK 3  
I 036 CHESS MINI  
I 014 CONNECTION  
I 035 GAME PAK 2  
I 048 GAME PAK 3  
I 015 HAMMURABI  
I 020 KEND 2  
I 007 MAZE GENERATOR  
I 013 MAZE RACE TIMED  
I 024 PARACHUTE  
I 006 SIMON SAYS  
I 053 TREK APPLE 2  
I 019 TREK APPLE 2 INSTR  
I 023 WUMPUS HUNT

**Game 102**

A 005 AAA MESSAGE  
A 002 ASTEROYDER  
B 080 ASTEROYDER.X  
A 008 BIKE JUMP BW  
A 017 CHECKERS I  
A 004 COIN TOSS  
A 017 CRAPS II  
A 015 FATHOM  
B 003 FATHOM.X  
A 034 FIZZ BIN  
A 031 FOOTBALL BW  
A 048 GOLF III  
A 008 MASTERMIND  
A 020 NAME THAT DATE  
A 002 SHOOTING ALIEN  
B 080 SHOOTING ALIEN.X  
A 012 TIC TAC TOE  
A 009 TIC TAC TOE BW

**Game 103**

I 005 AAA MESSAGE  
I 020 BATTLESTAR  
I 003 CHESS 2  
B 042 CHESS 2.X  
I 055 CONCENTRATION  
I 033 DRAGON MAZE 3  
I 035 FIRE  
I 027 FISHING->NEEDS WORK  
I 025 GOLF SCORE & HANDICAP  
I 025 PINBALL SUPER  
I 023 POKER STUD  
B 020 POKER STUD.X  
I 007 SIMON  
I 008 SOLITAIRE CHECKERS BW  
I 022 STORY TELLER  
I 012 TAX MAN  
I 009 TIME BOMB  
I 025 WUMPUS 2

**Game 104**

A 005 AAA MESSAGE  
A 010 ANAGRAM  
A 018 BASKETBALL  
A 007 BOGGLE I  
A 018 CARRIBEAN CRUISING  
A 014 CONNECTION  
A 049 CRIBBAGE II BW  
A 017 DRAGON MAZE ERASE I  
A 017 DRAGON MAZE ERASE II  
A 031 FORT II  
A 024 GEOGRAPHY I

A 009 HORSE RACE I  
A 037 LASER SEARCH  
A 073 MONOPOLY II  
A 046 STARTREK->NEEDS WORK  
A 021 TWONKY III

**Game 105**

I 005 AAA MESSAGE  
I 017 CAPITALS OF STATES BW  
I 054 CASINO ROYALE  
B 020 CASINO ROYALE.X  
I 009 DARTS  
I 023 FOOTBALL  
I 046 GIN RUMMY  
B 020 GIN RUMMY.X  
B 014 GIN RUMMY.Y  
I 014 HI LO  
I 041 ROLL EM  
I 024 SAUCER INVASION  
I 014 SIMON SAYS SUPER  
I 006 WALL BUILDER  
I 052 YAHTZEE

**Game 106**

A 005 AAA MESSAGE  
A 008 ANIMAL  
A 055 ART AUCTION  
A 006 BALL CATCHER  
A 017 BOMBARDMENT  
A 021 BOXED IN  
A 008 DEPTH CHARGE  
A 010 DOGFIGHT  
A 008 DOORS  
A 016 ELEVATE  
A 036 FORT I  
A 020 GOLF I  
A 014 KLINGON CAPTURE  
A 029 MONSTER CHASE  
A 007 NUMBER GUESS  
A 014 OBSTACLE  
A 007 PETALS ROUND THE ROSE  
A 004 ROLL DICE  
A 010 ROTATE  
A 070 STAR TREK SUPER  
A 018 STOCK MARKET GAME  
A 015 WORD PUZZLE

**Game 107**

A 005 AAA MESSAGE  
A 092 ATOM 20  
A 006 BID READ QUIZ  
T 002 BIDI  
T 001 BID2  
T 001 BID3  
A 020 BOXER  
T 002 BOXER DATA  
T 008 BOXER NAMES  
A 021 INSPECTOR CLEWSD  
A 011 KENO  
A 030 KING  
A 058 OIL  
A 050 OTHELLO WITH DOC  
A 018 SPLAT  
A 022 STAR LANES  
A 013 STAR LANES INSTR  
A 028 TWONKY II



### Game 108

A 005 AAA MESSAGE  
A 008 EXTERIOR BALLISTICS  
A 021 FACTOR GAME  
A 025 FIND HURKLE  
B 006 FIND HURKLE.OBJ  
A 043 FOOTBALL NFL  
A 027 FOOTBALL->NEEDS WORK  
A 010 HANGMAN I  
A 009 HANGMATH  
A 032 HOCKEY II  
A 033 MONOPOLY I  
A 023 OREGON  
A 041 OREGON.X  
B 015 OREGON.Y  
A 010 PIZZA  
A 026 SAIL PLANE LANDER  
A 031 SWORDS AND SORCERY I  
A 032 SWORDS AND SORCERY II

### Game 109

I 005 AAA MESSAGE  
I 056 ADVENTURE 2  
I 019 BLACK BOX  
I 011 BOMBARDMENT 2->NEEDS WORK  
I 013 BREAKOUT 2  
I 016 CAPITALS OF STATES  
I 021 CHASE  
I 033 CIVIL WAR QUIZ  
I 017 CONNECTION PDLS  
I 018 GAME PAK 5  
I 013 HISTORY QUIZ  
I 042 HORSE APPLE DOWNS  
I 003 HORSE RACE 1  
I 019 KWAK STAK  
B 016 KWAK STAK.X  
I 038 LEGACY->NEEDS WORK  
I 008 OFF THE WALLS  
I 014 QUIZ BUILD  
I 002 QUIZ->NEEDED  
I 032 TREASURE

### Game 110

I 005 AAA MESSAGE  
I 020 ACEY DEUCY FOR TWO  
I 024 AIR SIMULATOR  
I 009 CODE BREAKER  
I 013 CRAZY EIGHTS  
I 002 GAMMON 1  
B 026 GAMMON 1.X  
I 002 GAMMON 2  
B 034 GAMMON 2.X  
I 003 GUESS A NUMBER  
I 031 HORSE RACE 3  
I 011 MEMORY MADNESS  
I 017 PINBALL SLOW  
I 018 PING PONG  
I 012 PING PONG 2 PLAYER 2  
I 011 PING PONG OR HANDBALL 2  
I 005 ROCK PAPER SCISSOR  
I 054 SELL PLANTS OR LEMONADE  
I 015 SIMON SAYS WOW  
I 007 SPEED RACER  
I 005 TENNIS  
I 040 TIC TAC TOE  
I 008 TIC TAC TOE BW  
I 023 TIC TAC TOE PDL 0

### Game 111

I 005 AAA MESSAGE  
I 007 AIRPORT  
I 033 ALIEN UFO MAZE  
I 037 BATTLESHIP  
I 015 BLACKOUT  
I 006 BOMBS AWAY  
I 009 BREAKOUT 1  
I 011 BRICKOUT 2 PLAYERS  
I 013 BRICKOUT 3 SPEED  
I 008 DODGEBALL  
I 014 DON'T FENCE ME IN  
I 009 DRAGON MAZE 1  
I 016 DRAGON MAZE 2  
I 015 DRAGON MAZE ERASE 1  
I 018 DRAGON MAZE ERASE 2  
I 015 DRAGON MAZE REAL TIME  
I 028 HAMMURABI HURKLE MULTIPLY  
I 007 HIDDEN MOUSE 1  
I 017 MIDWAY  
I 012 OTHELLO 1  
I 006 PING PONG 2 PLAYER 1  
I 008 RUN A ROUND  
I 011 SEA WAR 1  
I 013 SEA WAR 2  
I 016 SLOT MACHINE \$2  
I 012 SLOT MACHINE BW  
I 014 SLOT MACHINE DICE  
I 020 TANKS  
I 003 TWENTY MATCHES

### Game 112

I 005 AAA MESSAGE  
I 020 BAGELS 3  
I 051 BLACKJACK  
I 010 BLACKJACK BW  
I 030 BLACKJACK TUTOR  
I 014 CHECKERS 1  
I 052 CHECKERS 2  
I 002 CHESS 1  
B 026 CHESS 1.X  
I 022 CLOSE THE SQUARE  
I 009 CRAPPS  
I 013 CUBIC 1  
I 014 CUBIC 2,3  
B 006 CUBIC 2,3.X  
I 005 HORSE RACE 2  
I 009 LUNAR LANDER BW  
I 036 POKER DRAW 1  
I 035 POKER DRAW BW  
B 022 POKER DRAW.X  
I 010 ROULETTE  
I 008 SOLITAIRE BW

### Game 113

I 005 AAA MESSAGE  
I 011 ABSTRACT  
I 007 ACEY DEUCY  
I 014 APPLEJACK 21  
B 020 APPLEJACK 21.X  
I 002 BREAKOUT 3  
B 022 BREAKOUT 3.X

I 010 CARD TRICK 2  
I 005 CHEMIST  
I 008 COLOR RAYS  
I 018 CONNECTION REV  
I 013 DRIVER  
I 008 GO MO KU  
I 002 GUIDED MISSILES  
B 018 GUIDED MISSILES.X  
I 011 HANGMAN->NEEDS WORK  
I 013 JUGGLE  
I 011 MAZE RACE  
I 058 OREGON TRAIL 2  
I 014 SAUCERS AND STARS  
I 013 SHOOT OUT  
I 025 SHOOTING GALLERY  
I 007 SHOOTING STARS 1  
I 011 SHOOTING STARS 2  
I 033 SHOW DOWN  
I 014 STOCK MARKET  
I 013 SUB  
I 012 WUMPUS 1

### Game 114

I 005 AAA MESSAGE  
I 015 ANTI AIRCRAFT  
I 025 APPLE WARS 1  
I 019 APPLE WARS 1.1  
I 007 BAGELS 1  
I 017 BINGO AUTO->NEEDS WORK  
I 040 BULLS AND BEARS  
I 055 GAME PAK NIGHTMARE  
I 017 GUIDED AIRPLANE  
I 008 HIDDEN MOUSE 2  
I 025 INTERSTELLAR  
I 005 KENO 1  
I 019 SLOT MACHINE \$2 + SOUND  
I 010 SPACE PILOT  
I 015 SPACE WAR FOR TWO  
I 014 STAR SHIP ATTACK  
I 012 STAR TREK MINI  
I 007 STAR WARS  
I 024 STAR WARS FOUR  
I 009 TREK  
I 047 WAR LORDS

### Game 115

I 005 AAA MESSAGE  
I 020 AIR ATTACK  
I 002 ALIVADER  
B 080 ALIVADER.X  
I 014 BAGELS 2  
I 019 BASEBALL  
I 018 BINGO  
I 007 BINGO CARD  
I 014 Bomber  
I 012 BOXING  
I 018 CARRYING BALLOON  
I 025 CRYPTOGRAM  
I 015 DEATH STAR  
I 020 FLY KILLER  
I 039 GAME PAK 4  
I 011 PINBALL  
I 013 PINBALL MARBLE  
I 020 SLOT MACHINE LOTTERY  
I 018 SPACE WAR 5  
I 007 SUB COMMAND  
I 021 SUBMARINE

### Game 116

A 005 AAA MESSAGE  
A 017 BATTLE  
A 015 CENTURY 51  
B 002 CENTURY 51.X  
A 020 CHECKERS II  
A 021 COMMODITY MARKET  
A 016 CRAFS 1  
A 013 CRYPTOGRAMS  
A 017 FRUSTRATION  
A 027 GEOGRAPHY II  
A 015 HANGMAN II  
A 022 LUNAR LANDING BW  
A 061 MARKET CRASH  
B 005 MARKET CRASH.X  
A 009 NAME THE STATES  
A 018 PUZZLE GENERATOR  
A 007 SOLITAIRE CHECKER PUZZLE  
A 010 SPELL THE STATES  
A 052 SPELUNKER  
A 012 SUBSCAN FOR TWO  
B 002 SUBSCAN.X  
A 031 WORLD WAR

### Game 117

I 005 AAA MESSAGE  
I 009 BOMBARDMENT 1  
I 009 CASINO  
I 023 CHASE REAL TIME  
I 062 CRIBBAGE  
I 012 LUNAR LANDER  
I 056 OREGON TRAIL 1  
I 037 POKER DRAW 2  
B 022 POKER DRAW.X  
I 008 RUSSIAN ROULETTE  
I 008 SEA HUNT  
I 027 SELL APPLES  
I 018 SHOOTING STARS 4  
I 013 SLOT MACHINE COLOR  
I 029 STOCK MARKET GAME  
I 006 TALKING NUMBER GUESS  
B 023 TALKING NUMBER GUESS.X  
I 027 THIEF  
I 004 TOWERS

### Game 118

A 005 AAA MESSAGE  
A 009 ARTILLERY I  
A 018 ARTILLERY II  
A 011 BOMBING MISSION  
A 018 BULLFIGHT  
A 014 CAPITALS OF COUNTRIES  
A 023 CAPITALS OF NATIONS  
A 004 CAPITALS OF STATES I  
A 016 CAPITALS OF STATES II  
A 017 CAPITALS OF STATES III  
A 017 CAPITALS OF STATES IV  
A 017 CAPITALS OF STATES V  
B 012 CAPITALS OF STATES V.X  
A 021 FUR TRADER  
A 011 HORSE RACE II  
A 010 LUNAR LANDING  
A 010 ROCKET  
A 020 ROULETTE BW  
A 081 READING SPEED  
A 010 TARGET  
A 054 TREASURE HUNT

### Game 119

I 005 AAA MESSAGE  
I 010 BACKGAMMON  
I 013 BOWLING 1  
I 013 CUBIC 3  
I 030 FOOTBALL NFL  
I 066 GOLF PAR  
I 024 HAUNTED MANSION  
I 014 KILL A LINE  
I 060 OREGON TRAIL 3  
I 034 OTHELLO 2  
B 015 OTHELLO 2.X  
I 009 PING PONG OR HANDBALL 1  
I 006 REVERSE NUMBERS  
I 010 ROBOT CHASE  
I 049 SALVO  
I 017 SHOOTING STARS 3  
I 018 SPACE CRAFT LANDING  
I 004 WORDS BOUNCING

### Game 120

A 005 AAA MESSAGE  
A 047 ACEY DEUCY CARDS  
I 051 APPLE HORSE (C)  
A 020 BOGGLE II  
A 036 EAMON CHAR BUILDER  
A 014 ECONOMIC SIMULATION  
A 023 FOOTBALL APPLE  
I 046 GAME PAK 1  
I 039 GAME PAK 4  
I 002 ROCKET PILOT  
I 003 ROCKET PILOT INSTR  
I 010 RP  
B 002 RP.1  
B 002 RP.2  
B 002 RP.3  
A 032 ROULETTE  
A 002 TASK FORCE  
A 031 TASK FORCE.1

### Adventure 140

I 005 AAA MESSAGE  
T 001 ADESCRIP  
I 002 ADVENTURE HELLO  
T 002 ADVENTURE.EX  
I 003 ADVENTURE.EX MAKER  
I 121 ADVENTURE.PROGRAM  
T 001 AITEMS  
T 001 AMESSAGE

### Adventure 141

A 005 AAA MESSAGE  
T 031 ADESCRIP  
A 058 ADVENTURE  
A 004 ADVENTURE HELLO  
A 010 ADVENTURE START-UP  
T 011 AITEMS  
\*T 082 AMESSAGE  
T 021 AMOVING  
A 003 EDIT AMESSAGE  
A 059 STARWARS ADVENTURE  
A 003 VIEW AMOVING

### Adventure 142

A 005 AAA MESSAGE  
T 020 ADVDIR  
A 006 ADVENTURE HELLO  
A 067 ADVENTURE JII  
B 006 ADVHELP-1  
B 006 ADVHELP-2  
B 006 ADVINST-1  
B 006 ADVINST-2  
T 011 ADVITEM  
T 002 ADVMOVE  
B 005 ADVOCAB.B  
T 034 ADVSXT  
T 227 ADVTXT

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A 005 AAA MESSAGE  
A 003 BILLBOARD ROMANO  
A 003 BILLBOARD SINEWAVE  
A 008 CATALOG MANAGEMENT  
A 027 CATALOG MANAGEMENT EDIT  
A 009 CLOCK CARD HELLO  
A 009 CLOCK CARD HELLO I  
A 012 CLOCK CARD HELLO II  
A 013 CLOCK CARD TIME KEEPER  
A 005 HELLO ALLEN I  
A 017 HELLO ALLEN II  
A 003 HELLO AND ART  
A 002 HELLO APPLE DAYTON  
B 008 HELLO APPLE DAYTON.X  
A 004 HELLO APPLE LOGO  
B 034 HELLO APPLE LOGO.X  
A 004 HELLO APPLE P1 DOM  
B 034 HELLO APPLE P1.X  
B 008 HELLO APPLE P1.Y  
A 002 HELLO APPLE-VENTION  
B 008 HELLO APPLE-VENTION.X  
I 006 HELLO APPLINET  
B 010 HELLO APPLINET.X  
B 006 HELLO APPLINET.Y  
A 004 HELLO AUTO SELECT  
A 004 HELLO AUTO SELECT I  
B 003 HELLO AUTO SELECT.X  
A 003 HELLO BILLBOARD  
A 005 HELLO BROWN  
A 002 HELLO FRAME  
A 006 HELLO FREEMAN DAVIS  
A 004 HELLO FROM CAC  
B 034 HELLO FROM CAC.X  
A 007 HELLO IAC  
A 009 HELLO MASSIMO  
I 034 HELLO TITLE DEMO  
A 006 HELLO WAGNER  
A 007 MENU IDEA GOLDING  
A 004 MENU IDEA I  
A 005 MENU IDEA II  
A 005 MENU IDEA III  
A 008 MENU IDEA IV  
A 005 MENU IDEA MUNARRIZ  
A 012 MENU IDEA V  
A 003 MENU LOCK  
B 004 MENU LOCK^  
T 001 PROG.LIST



## Hello & Menu 167

I 005 AAA MESSAGE  
I 003 BILLBOARD WYSOCKI  
I 002 HELLO  
I 015 HELLO ALLEN  
I 008 HELLO APPLE PI LOGO  
I 002 HELLO APPLE-VENTION  
B 008 HELLO APPLE-VENTION.X  
I 003 HELLO APPLECORPS SAN DIEGO  
I 002 HELLO APPLESIDER  
B 034 HELLO APPLESIDER.X  
I 003 HELLO BILLBOARD AAA  
I 005 HELLO CAC 1  
I 005 HELLO CAC 2  
B 002 HELLO CAC.X  
B 006 HELLO CAC.Y  
B 006 HELLO CAC.Z  
I 006 HELLO CALL APPLE  
I 002 HELLO DELETED FILES  
B 005 HELLO DELETED FILES.X  
I 003 HELLO FRAME  
B 002 HELLO FRAME.X  
I 004 HELLO FREE FULL %  
I 009 HELLO GARY FOOTIE  
I 011 HELLO GETTING CATALOG  
I 004 HELLO KAMINS  
B 002 HELLO KAMINS.X  
I 018 HELLO KELTZ  
I 009 HELLO LETTER PUSH  
I 004 HELLO LETTER SELECT 1  
I 004 HELLO LETTER SELECT 2  
I 003 HELLO LETTER SELECT 3  
I 004 HELLO LETTER SELECT 4  
I 008 HELLO LOWER CASE  
B 014 HELLO LOWER CASE.X  
B 002 HELLO LOWER CASE.Y  
I 008 HELLO MELS  
I 007 HELLO PAPIEWSKI  
I 013 HELLO PIC  
I 003 HELLO ROUTINE  
I 002 HELLO SAMPLE  
I 004 HELLO SELECTOR  
I 016 HELLO SOMMERVILLE ET AL 1  
I 018 HELLO SOMMERVILLE ET AL 2  
I 002 HELLO SPLIT CAT  
B 003 HELLO SPLIT CAT.X  
I 010 HELLO SPLIT CATALOG  
I 005 HELLO WHITESIDE DENZAU  
B 034 HELLO.PIC  
I 006 MENU IDEA + SUMMARY  
I 009 MENU IDEA 1  
I 003 MENU IDEA 2  
I 009 MENU IDEA GARSON  
I 003 MENU IDEA PART 1  
A 006 MENU IDEA PART 2  
A 004 MENU IDEA PART 3  
I 009 MENU IDEA PUGET SOUND  
I 008 MENU IDEA SEEGER  
I 008 MENU IDEA WAP

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A 005 AAA MESSAGE  
A 008 ANGLO TO METRIC I  
A 011 ANGLO TO METRIC II  
A 003 ARCSIN ARCCOS  
A 016 CALCULATOR  
A 007 CALCULUS I  
A 013 CALCULUS II  
A 007 CASH REGISTER  
A 005 CIRCLE AREA CIRCUM  
A 009 COMPOUND INTEREST  
A 010 CRITICAL PATH ANALYSIS  
A 006 CURVE FIT I  
A 013 CURVE FIT II  
A 013 CURVE FIT III  
A 003 DERIVATIVE OF EQUATION  
A 010 DIFFERENTIAL EQN SOLVER  
A 015 EQUATION SOLVER  
A 005 EQUATIONS I  
A 014 EQUATIONS II  
A 014 FACTOR  
A 003 FIBONACCI NUMBERS  
A 012 FOOT CANDLE ANALYSIS  
A 010 FOURIER  
A 011 FOURIER TRANSFORM  
A 007 GAUSSIAN QUADRATURE II  
A 010 MATH DRILL I  
A 011 MATH DRILL II  
A 005 MATRIX INVERSION II  
A 009 MATRIX OPERATION  
A 016 MEAN VARI STD DEVIA II  
A 007 MODE FINDER  
A 003 N FACTORIAL  
A 007 PLOT CONSECUTIVE REACTIONS  
A 006 PLOT FUNCTIONS OF X  
A 003 PROG CHART ?  
A 011 ROBOT MOTOR DESIGN  
A 005 SINE FUNCTION  
A 010 STATISTICS I  
A 014 STATISTICS II  
A 014 T TEST STDN DEVIATION  
A 004 TIME SPEED DISTANCE EXERCISE  
A 006 TIME SPEED DISTANCE FUEL  
A 014 TRIANGLE SOLVER  
A 011 UNPAIRED GROUP COMPARISON

## Math & Statistics 173

I 005 AAA MESSAGE  
I 009 ADDITION AND GRAPHICS  
I 004 ADDITION AND SOUND 1  
I 005 ADDITION AND SOUND 2  
I 008 ADDITION DRILL  
I 014 BESSEL FUNCTIONS  
I 034 BRAIN BUSTERS  
I 005 COIN TOSS  
I 003 FRACTION TO DECIMAL  
I 008 LIGHT PEN 3 DEMO  
I 014 LIGHT PEN MATH DEMO  
I 026 MATH AND MUSIC  
I 005 MATH DIVISION 2  
I 007 MATH DIVISION 3  
I 008 MATH DIVISION CALC 1  
I 010 MATH DIVISION CALC 2  
I 030 MATH DRILL EASY  
I 031 MATH DRILL HARD  
I 025 MATH FLASH CARD  
I 009 MATH HEX QUIZ  
I 009 MATH IN COLOR I  
I 012 MATH IN COLOR 2  
I 009 MATH MULTIPLY 2 NUMBERS

I 004 MATH MULTIPLY CALC  
I 053 MATH SUPER  
I 021 MATH TUTOR  
I 008 NUMBER LOGIC  
I 008 PI 1  
I 009 PI 2  
I 005 SQUARE & CUBE A NUMBER

## Math & Statistics 174

A 005 AAA MESSAGE  
A 003 ANGLE CONVERSION  
A 012 ANGLO TO METRIC III  
A 003 AREA OF POLYGON  
A 008 BINOMIAL DISTRIBUTION  
A 004 BLACKBODY  
A 003 CHI SQUARE DISTRIBUTION  
A 004 CHI SQUARE TEST  
A 004 COORDINATE CONVERSION  
A 008 COORDINATE PLOT  
A 003 CURVILINEAR INTERPOLATION  
A 002 DERIVATIVE  
A 016 DFIT  
A 011 DIFFERENTIAL EQN SOLVER DEMO  
A 004 EXPONENTIAL REGRESSION  
A 004 F DISTRIBUTION  
A 004 GAUSSIAN QUADRATURE I  
A 003 GEOMETRIC MEAN  
A 004 GEOMETRIC REGRESSION  
A 004 GREATEST COMMON DENOMINATOR  
A 005 HISTOGRAM  
A 003 LINEAR INTERPOLATION  
A 007 LINEAR PROGRAMMING  
A 004 LINEAR REGRESSION  
A 005 MANN WHITNEY U TEST  
A 022 MATH DRILL III  
A 019 MATH MULTIPLY DRILL  
A 019 MATH->NEEDS WORK  
A 013 MATRICES  
A 004 MATRIX INVERSION I  
A 004 MATRIX MULTIPLICATION  
A 004 MATRIX OPERATION SIMPLE  
A 004 MEAN VARI STD DEVIA I  
A 007 MULTIPLE LINEAR REGRESSION  
A 004 NORMAL DISTRIBUTION  
A 006 NTH ORDER REGRESSION  
A 004 NUMBER COMBINATIONS  
A 002 PARABOLA PLOT  
A 003 PERMUTATION COMBINATION I  
A 007 PERMUTATION COMBINATION II  
A 003 POISSON DISTRIBUTION  
A 006 POLAR EQUATION PLOT  
A 011 POLYFIT  
A 013 POLYNOMIAL REGRESSION  
A 006 POWER CURVE FIT (C)  
A 003 PRIME FACTORS I  
A 006 PRIME FACTORS II  
A 003 QUADRATIC FORMULA  
A 006 QUADRATIC SURFACE  
A 015 RIGHT TRIANGLE SOLVER  
A 016 ROOT FINDER  
A 005 ROOTS OF POLY HALF  
A 005 ROOTS OF POLYNOMIALS  
A 004 SIMPSON'S RULE  
A 004 SIMULTANEOUS EQUATIONS  
A 004 T DISTRIBUTION  
A 005 T DISTRIBUTION TEST  
A 003 TRAPEZOIDAL RULE  
A 005 TRIANGLE FACTORS  
A 007 TRIANGLE PARTS  
A 003 TRIG POLYNOMIAL  
A 004 VECTOR ANALYSIS  
A 003 VECTOR OPERATIONS

## Math & Statistics 175

I 005 AAA MESSAGE  
I 006 ADDITION QUIZ  
I 015 COIN TOSS & BINOMIALS  
I 014 EQUATIONS  
I 004 GROUP AVERAGES  
I 003 MATH DIVISION I  
I 016 PRIMES & FACTORS->NEEDS WORK

## Math & Statistics 176

A 005 AAA MESSAGE  
A 005 AVERAGES  
A 007 CHESS BOARD  
A 009 COMPOUND INTEREST TABLES  
A 007 COMPRESSION RATIO  
A 007 CONSECUTIVE REACTIONS  
A 005 CYCLOID  
A 006 EQUIPROBABLE  
A 012 FOURIER TRANSFORM HIRES  
A 005 FUNCTION PLOT I  
A 005 FUNCTION PLOT IA  
A 006 FUNCTION PLOT II  
A 012 FUNCTION PLOTTER I  
A 013 FUNCTION PLOTTER II  
A 006 FUNCTION ZEROS  
A 012 GAMBLERS RUIN  
T 003 GRANTS 100  
T 006 GRANTS 400  
T 002 GRANTS 50  
A 015 HISTOGRAM PLOT  
A 008 HYPERBOLA  
A 016 INTEGRATION  
A 006 LISSAJOUX  
A 005 MATH TOTALS  
A 020 MATH WILLIE WORM  
A 017 METRIC AREA  
A 004 METRIC GAS PRICE  
A 005 METRIC KELVIN TEMP  
A 017 METRIC KITCHEN  
A 015 METRIC LENGTH  
A 004 METRIC TEMP  
A 020 METRIC TEMP OR WEIGHT  
A 007 METRIC TEMPERATURE  
A 026 METRIC VOLUME  
A 005 MONTE CARLO  
A 003 POLAR ANGLES  
A 007 POLAR COORDINATES  
A 006 POLL  
A 005 ROSETTE  
A 014 SIMULTANEOUS EQN AND MATRIX  
A 006 SPHERICAL  
A 023 SPIRAL2

## Music & Sound 182

I 005 AAA MESSAGE  
I 002 MUSIC ALLEY CAT  
B 004 MUSIC ALLEY CAT.X  
I 056 MUSIC APPLE ORGAN  
I 025 MUSIC APPLEODION  
I 013 MUSIC BACCH  
B 020 MUSIC BACH  
I 014 MUSIC BACH SQUARES 1  
I 017 MUSIC BACH SQUARES 2  
I 003 MUSIC BUGLE  
I 021 MUSIC CHILDRENS  
I 018 MUSIC FLAG  
I 009 MUSIC ODE TO JOY  
I 037 MUSIC PAK 1

I 016 MUSIC POTPOURRI  
I 019 MUSIC SMALL WORLD  
I 012 MUSIC SYNTHESIZED  
I 012 MUSIC TEMPERED SCALES  
I 016 MUSIC VOICE  
I 021 MUSIC WRITER 1  
I 024 MUSIC WRITER 2  
I 002 MUSIC WRITER 2 DOC  
I 007 SOUND EFFECTS MUZAK  
I 009 SOUNDS BY HART  
I 004 SOUNDS ROUTINE  
A 005 XMAS SONG PRINTED

## Music & Sound 183

I 005 AAA MESSAGE  
\*T 003 AMERICA  
I 012 HANON ETUDE #1 IN C  
\*T 002 HAPPY BIRTHDAY  
A 015 HARMONIC ANALYSIS  
I 019 MUSIC COMPUTER  
I 036 MUSIC FUNCTIONS  
I 011 MUSIC GEE  
I 023 MUSIC IN IB  
I 014 MUSIC MAKER  
I 017 MUSIC MOZART THEME  
I 007 MUSIC RIGBY  
A 004 MUSIC START  
I 030 MUSIC TWO VOICES  
I 022 MUSIC WRITER 3  
I 008 MUSICAL KEYBOARD  
B 002 MUSICAL KEYBOARD.X  
A 017 MUSICAL MEMORY  
I 010 NAME THAT TUNE  
I 007 SOUND EFFECTS DEMOS  
A 005 SOUND EFFECTS HOW TO  
I 007 SOUND EFFECTS RANDOM  
A 003 SOUND ROUTINE  
I 011 SOUNDS AND MUSIC STARWARS  
I 006 SWANEE RIVER  
\*T 038 TUNES

## Music & Sound 184

I 005 AAA MESSAGE  
I 026 APPLEODIAN 2<-NEEDS WORK  
I 018 MAESTRO INTRO  
B 037 MAESTRO.DAT1  
B 037 MAESTRO.DAT2  
B 037 MAESTRO.DAT3  
B 037 MAESTRO.DAT4  
B 037 MAESTRO.DAT5  
A 004 TONE TEST  
B 002 TONE TEST.X

## Passion 190

A 005 AAA MESSAGE  
A 002 FORM 0 STARTUP  
B 034 FORM 1  
B 034 FORM 2  
B 034 FORM 3  
B 034 FORM 4  
B 034 FORM 5  
B 034 FORM 6  
B 034 FORM 7  
B 034 FORM 8  
B 034 FORM 9  
A 005 HOT APPLES I  
A 006 HOT APPLES II

A 013 TOUCH I  
A 013 TOUCH II  
I 013 ZOOM 1  
I 013 ZOOM 2

## Passion 191

I 005 AAA MESSAGE  
A 006 PASSION STARTUP  
I 034 APPLE PET  
I 002 CUBIK 1  
I 003 CUBIK 2  
I 028 CUBIK-1  
B 017 CUBIK-1 (A\$0B00/L\$0FB3)  
I 002 EXERCISE 1  
I 002 EXERCISE 2  
I 002 EXERCISE 3  
I 002 EXERCISE 4  
I 002 EXERCISE 5  
I 002 EXERCISE 6  
I 002 EXERCISE 7  
I 002 FR  
B 034 FRENCH  
I 002 GE  
B 034 GERMAN  
I 002 IR  
B 034 IRISH  
I 002 IT  
B 034 ITALIAN  
I 002 RANDOM HELLO  
B 034 RANDOM.OBJ  
I 002 RU  
B 034 RUSSIAN  
I 002 SP  
B 034 SPANISH  
I 002 SW  
B 034 SWEDISH

## Passtime & Other 196

A 005 AAA MESSAGE  
A 028 ANALYST ELIZA  
A 013 ANALYST HECTOR  
A 003 BABY NAMES  
A 034 BIO CYCLE  
A 003 BIRTHDAY PROBABILITY  
A 015 BOOZE N YOU  
A 008 CALENDAR I  
A 023 CALENDAR II  
A 004 DAY OF THE WEEK I  
A 006 DAY OF THE WEEK II  
A 005 DAYS BETWEEN TWO DATES  
A 017 DECISION MAKER I  
A 028 DECISION MAKER II  
A 014 ELECTRICITY COST (C)  
A 007 ESP TEST  
A 030 FREUD  
A 019 GRAMMAR MAD LIB  
A 006 GREETINGS  
A 023 HOUSE PLANTS  
A 007 JUMBLES MNEMONIC  
A 003 LADDER ANGLE SAFETY  
A 010 LIFE BAKER  
A 010 MAP CHECK  
A 006 MIND READER  
A 002 ONE LINER 2 ?  
A 003 SAILBOAT STAYS  
A 015 TOUT  
A 003 VOWEL FINDER  
A 008 WATER CONSERVATION  
A 021 WEATHER FORECAST  
A 014 WEEKDAY FROM 1582



## Passtime & Other 197

I 005 AAA MESSAGE  
I 016 AD LIB I  
I 032 ANALYST COMPUTER 2  
I 040 ANALYST ELIZA  
I 010 CALENDAR PERPETUAL  
I 052 COMPUTER RALPH  
I 009 CROSS WORD  
I 022 DECISION MAKER  
I 008 HOW DO I LOVE THEE  
I 009 IQ TEST  
I 006 LIFE COLOR  
I 019 LIFE CONWAY  
I 011 LIFE SANDERS 1  
I 020 LIFE SANDERS 2  
I 015 LIFE HERTZFELD  
I 003 MIRROR PRINT IMAGE  
I 005 PHONE MNEMONIC 2  
I 026 POET  
I 006 RANDOM WORDS 2  
I 003 STOP WATCH  
I 003 TEASER  
I 039 TRILLION STORIES  
I 035 TRILLION STORIES->NEEDS WORK  
I 003 UNBELIEVABLE

## Passtime & Other 198

A 005 AAA MESSAGE  
A 048 BIORHYTHMS  
A 011 CALENDAR ONE MONTH  
A 007 CALENDAR PERPETUAL  
A 020 CALENDAR REMINDER  
I 020 COLOSSUS  
A 011 DECISION MAKER III  
I 063 DIRTY TRICKS BEWARE  
A 025 DIRTY TRICKS II  
B 018 DIRTY TRICKS.X  
I 020 HDROSCOPE  
A 026 MILES PER GALLON RECORD  
I 074 NUMEROLOGY  
I 002 PHONE MNEMONIC 1  
B 003 PHONE MNEMONIC 1.X  
A 010 PROBABILITY  
A 021 RANDOM INSULTS  
I 002 RANDOM WORDS 1  
I 003 SYN TAX  
I 008 TIMER

## Passtime & Other 199

I 005 AAA MESSAGE  
I 016 ANALYST COMPUTER 1  
I 006 CALENDAR  
I 002 CLASSIFIER  
B 044 CLASSIFIER.X  
I 011 EASTER DATES  
I 055 ENGLISH QUIZ  
I 007 GRAMMAR AND BEAUTY  
I 033 HAIKU POETRY  
I 021 LIFE OPERATING SYSTEM  
B 003 LIFE OPERATING SYSTEM.X  
I 009 LIFE SUPER  
B 006 LIFE1.LIFE  
B 006 LIFE2.LIFE  
B 006 LIFE3.LIFE  
B 006 LIFE4.LIFE  
B 006 LIFE5.LIFE

I 009 MEMORY AID  
I 077 MULTI->NEEDS WORK  
I 008 PEN 4 ?  
I 021 PENTOMINO  
I 016 PHOTO COLOR QUIZ  
I 025 PHOTO FILTER QUIZ

## Utility 214

A 005 AAA MESSAGE  
A 003 ALPHABETIZE  
A 003 APPEND FILE  
A 002 AUTOBOOT 16  
B 004 AUTOBOOT 16.X  
I 043 BASIC-APPLESOFT  
A 005 BSTAT HOW TO  
A 002 BSTAT II  
A 003 CATALOG SORTER  
A 003 COMMAND GENERATOR  
B 002 COMMAND GENERATOR.X  
A 002 COMP-X MONITOR (C)  
B 016 COMP-X MONITOR.X  
A 006 DEBUGGING AID  
A 004 DECIMAL POINT  
A 004 DOS COMMAND FINDER  
A 005 DOS COMMAND FINDER REV  
A 012 DOS SHORT COMMANDS  
B 002 DOS SHORT COMMANDS.X  
B 002 DOS SHORT.RESTORE  
A 014 DUMP TRACK AND SECTOR  
T 002 EXEC FILE  
A 013 EXEC FILE GENERATOR  
A 005 FREE SECTORS DOS PATCH  
A 002 JUMP POINTS DOS 3.2  
B 002 JUMP POINTS DOS 3.2.X  
T 009 LIBRARY 1  
I 017 LIBRARY REVIEW INPUT  
A 004 LIBRARY INPUT CORRECTOR  
A 019 LIBRARY REVIEW  
B 006 LIBRARY REVIEW.X  
T 002 LITERAL  
A 005 LITERAL INPUT  
A 004 LOMEM HIMEM AB  
A 008 MEMORY AVAILABLE RAM ONLY  
B 004 MEMORY CHECK 6502  
A 003 MEMORY CLEAR  
I 008 MOTOR SPEED  
A 003 MOTOR SPEED DOC  
T 002 NAMES  
A 007 NAMES FILE CREATE  
A 005 NAMES FILE EXCH  
A 007 NAMES FILE READ  
A 004 PRINT USING I  
A 005 PRINT USING II  
A 005 REMOVE STRING SPACES  
A 012 SORT NUMBERS WOODRUM  
A 009 SORT QUICK ALPHA  
A 006 SORT QUICK NUMBER  
A 005 SORT WORDS II  
A 005 STRING REVERSE FUNCTION  
A 007 STRING SAVE DEMO  
A 009 SUPER CATALOG BUILDER  
B 002 SUPER CATALOG BUILDER.X  
A 005 SYSTEM CONFIGURATION  
A 004 TAPE RECALL DATA  
A 004 TAPE STORE DATA  
A 003 THROTTLE  
A 004 TOKEN ADDRESS TABLE II  
A 005 TOKEN ADDRESS TABLE III  
A 006 VARIABLES DISPLAY  
A 013 YES NO AND PAUSE

## Utility 215

I 005 AAA MESSAGE  
I 013 APPEND B TO AB FILES  
I 006 BASIC INTERPRETER SET  
A 004 BASIC-INTEGER  
B 022 BASIC-INTEGER.X  
I 007 CATALOG TRACK LISTER  
I 003 CHARACTER GENERATOR INSTR  
I 017 CHARACTER GENERATOR PROGRAM  
I 015 CHARACTER GENERATOR SAMPLE  
I 015 CHARACTER GENERATOR YOURS  
I 011 COPY ALDRICH 1  
I 013 COPY ALDRICH 2  
I 014 COPY ALDRICH 3  
I 003 COPY BINARY FILE 1  
I 005 COPY BINARY FILE 3  
I 018 COPY GWR 1  
I 018 COPY GWR 2  
I 002 COPY LHS  
B 009 COPY LHS.X  
I 013 DISK MARK  
I 002 DOS VERSION?  
I 004 DUMP HIRES PIC  
B 002 DUMP HIRES PIC.X  
B 004 DUMP HIRES PIC.Y  
I 008 EDO DOC  
B 002 ED1  
I 004 ED2  
T 002 ED3  
I 013 EDIT ASSM  
B 022 EDIT/ASSM  
I 004 EXEC FILE CREATE  
I 006 FRESH DOS  
I 002 HIT ANY KEY TO CONTINUE  
I 004 LIST PAGE  
I 002 LIST SLOW 1  
B 002 LIST SLOW 1.X  
I 002 LIST SLOW 2  
B 003 LIST SLOW 2.X  
I 005 LIST STOP IB  
I 002 LIST VERY SLOW  
B 002 LIST VERY SLOW.X  
I 004 LOMEM HIMEM IB  
I 002 LOOP  
I 003 NO VOL ID CHK 3.1 ONLY  
I 005 PADDLE SWITCH TEST  
I 005 PDL SWITCH COLOR TEST  
I 002 POKE MACH LANG INTO MEM  
I 017 RAM TEST 48K  
I 006 REPLACE CRASHED DOS  
I 004 SHORTEN COMMANDS  
I 032 TAPE DATA DISPLAY  
I 002 TITLE CENTERING ROUTINE  
I 003 TYPING VERTICAL  
I 006 UPPER LOWER CASE

## Utility 216

A 005 AAA MESSAGE  
A 003 BASE CONVERSION CHART I  
A 003 BASE CONVERSION CHART II  
A 006 BASE CONVERT \*\*  
A 005 BASE CONVERT BEYMER  
A 012 BASE CONVERT ELLMERS  
A 005 BASE CONVERT JENKINS  
A 029 BASE CONVERT MASSIMO  
I 043 BASIC-APPLESOFT  
A 007 BINARY TO FP  
A 053 CALENDAR AND POSTERS  
A 002 CAPTURE A PROGRAM  
A 005 CATALOG PRINTER  
A 003 CLEAR MEMORY

04 COPY TEXT FILE I  
04 COPY TEXT FILE II  
04 COPY TEXT FILE III  
04 CTRL CHAR CATALOG  
04 CTRL CHAR REVEAL  
03 DUMP ASCII MEMORY  
02 ERASE HIRES SCREEN  
01 FORMAT #  
03 FREE SECTORS ALDRICH  
03 FREE SECTORS BROWN  
04 FREE SECTORS BROWN.X  
02 FREE SECTORS BROWN  
09 ILLEGAL COMMANDS  
05 LIST PAGE DIAZ  
05 LIST PAGE WYSOCKI  
02 LIST PAGE WYSOCKI.X  
02 LIST PAGE.X  
07 MACH TO POKES CONV  
02 MUSICAL KEYS  
02 MUSICAL KEYS.X  
13 PHONE DIALER  
03 POINTERS  
02 PRW6 ON RESET  
03 RANDOM SENTENCE  
02 REM STRIPPER  
03 REM STRIPPER DOC  
01 REN/MRG  
06 RENUMBER  
04 RENUMBER MERGE  
10 RENUMBER MERGE.X  
03 REVERSE PRINT  
18 SORT CATALOG  
03 SORT CATALOG->NEEDS WORK  
02 SORT CATALOG.X  
15 SSM AIO BOARD  
04 STRING COMPARATOR  
04 STRING IN A STRING SEARCH  
04 TEXT FILE EDIT  
03 TEXT FILE PEEK  
03 TEXT FILE READ  
03 TEXT FILE READ AND PRINT I  
05 TEXT FILE READ AND PRINT II  
05 TEXT FILE WRITE  
04 TOKEN ADDRESS TABLE I  
05 UTILITY STATEMENTS

## Utility 217

005 AAA MESSAGE  
007 AUTO NUMBER I  
002 AUTO NUMBER 1.X  
005 BASE CONVERT EDMUNDS  
043 BASIC-APPLESOFT  
003 BENCHMARK  
003 BSTAT I  
002 BUTCH  
003 BUTCHER  
010 CHARACTER DECODER  
023 DUMP MEMORY AND ALTER  
002 DUMP PAGE  
004 DUMP PAGE.X  
029 EDIT FILE  
023 EDIT FILE DOC  
003 FORMAT \$  
006 FORMAT \$ AND CTS  
005 FORMAT %  
005 IB TO AB  
027 INTEGER @ \$6000-TAPE  
027 INTEGER @ \$A000-TAPE  
006 INVISIBLE SIGNATURE  
005 LIST STOP AB  
008 RESTORE DELETED FILES

A 005 RESTORE LINE  
A 006 ROMAN NUMBERS  
A 009 SORT ALPHA  
A 006 SORT ALPHA OR NUMBR I  
A 008 SORT ALPHA OR NUMBR II  
A 005 SORT ALPHA SHEL-METZ  
A 009 SORT AMPERSAND  
B 008 SORT AMPERSAND.X  
B 033 SORT AMPERSAND.Y  
A 007 SORT HEAP  
A 008 SORT HEAP REV  
B 008 SORT ML  
A 003 SORT NUMBERS  
A 005 SORT NUMBR SHEL-METZ  
A 003 SORT SHEL-METZ  
A 007 SORT WORDS I  
A 003 TAPE SPEED TABLE  
A 008 TYPE SETTER

## Utility 218

I 005 AAA MESSAGE  
I 006 AUTHORSHIP  
I 005 BASE CONVERSION CHART  
I 008 BASE CONVERT  
I 007 BASE CONVERT GARSON  
I 005 BASE CONVERT WILLIAMS  
I 006 BASE CONVERT WILLIAMS GOLDING  
I 003 BASIC->MONITOR  
A 004 BASIC-INTEGER  
B 022 BASIC-INTEGER.X  
I 007 CATALOG BUILDER  
I 003 CATALOG LISTER  
I 004 COPY BINARY FILE 2  
I 007 COPY SINGLE DRIVE 1  
I 005 COPY TEXT FILE  
I 002 CTRL CHAR FIND  
B 002 CTRL CHAR FIND.X  
I 009 DISK SPACE SUMMARY  
I 011 DISK TO TAPE ALDRICH  
I 003 DISK TO TAPE DUMP  
B 003 DISK TO TAPE DUMP.X  
B 012 DISK TO TAPE DUMP.Y ?  
I 005 DISK TO TAPE SAVE 6  
I 006 DISK TO TAPE SAVE 6 REV  
I 005 DISK TO TAPE WRITE  
I 011 DOS COMMAND CHANGER  
I 014 DUMP DISK OR TRACK  
I 011 DUMP DISK OR TRACK (C) 1  
I 018 DUMP DISK OR TRACK (C) 2  
I 028 DUMP DISK OR TRACK (C) REV  
I 005 FILE HANDLER SAMPLE  
I 004 FORMAT REMARKS  
I 002 IB CAPTURE  
I 003 IB TO AB 1  
I 003 IB TO AB 2  
I 004 IB TO AB ALDRICH  
I 002 LIST STOP  
B 002 LIST STOP.X  
I 008 MAP SECTORS PAYMAR 1  
B 002 MAP SECTORS PAYMAR 1.X  
I 008 MAP VTOC  
I 011 MASTER KEY->NEEDS WORK  
I 013 MEMORY SPYING  
I 004 MEMORY TEST FAST  
I 004 MEMORY TEST SLOW  
I 004 MOVIT BYTES  
I 002 MUSICAL KEYS  
B 002 MUSICAL KEYS.X  
I 008 PASSWORD KEY  
I 005 PATTERN SEARCH  
I 013 SECTOR RECOVER  
I 007 SECTOR RECOVER DOS

I 008 STRING CONCATENATION  
I 004 TEXT FILE CREATE  
I 003 TEXT FILE READ  
I 005 TEXT FILE READ OR WRITE 1  
I 006 TEXT FILE READ OR WRITE 2  
I 003 TEXT FILE WRITE  
I 007 TEXT TOKEN FIND  
B 002 TEXT TOKEN FIND.X  
B 007 VTOC RECONSTRUCT  
I 003 VTOC RECONSTRUCT DOC

## Utility 219

I 005 AAA MESSAGE  
I 006 AUTO NUMBER  
A 004 BASIC-INTEGER  
B 022 BASIC-INTEGER.X  
I 004 BSTAT DECIMAL  
I 009 BSTAT GOLDING TAYLOR 1  
I 009 BSTAT GOLDING TAYLOR 2  
I 006 BSTAT HERTZFELD FONG 1  
I 005 BSTAT HERTZFELD FONG 2  
I 007 BSTAT HERTZFELD FONG HOAG  
I 009 BSTAT LHS 1  
I 017 BSTAT LHS 2  
I 002 BSTAT LHS 3  
B 008 BSTAT LHS 3.X  
I 002 BSTAT LHS 4  
B 008 BSTAT LHS 4.X  
I 002 BSTAT LHS 5  
B 009 BSTAT LHS 5.X  
I 012 BSTAT TURS  
I 014 CATALOG INPUT  
I 004 CATALOG LAZY  
I 020 CATALOG PROCESS  
B 003 CATALOG PROCESS.X  
I 006 DELETE FILES  
I 002 DISK FULL FLASHING  
I 002 DISK FULL INVERSE  
I 019 DISK HELPER  
I 002 DUMP PAGE  
B 004 DUMP PAGE.X  
I 003 EDIT 2  
B 002 EDIT 2.X  
I 005 EDIT SUBJECT  
I 003 FREE SECTORS  
I 002 FREE SECTORS OR 50  
B 002 FREE SECTORS OR 50.X  
I 010 FREE SECTORS PORTER  
I 003 INVERSE FLASHING  
I 005 LIST AND LOCATE->NEEDS WORK  
I 003 LIST SLOW PDL 0  
I 005 LIST STOP DUNMIRE  
I 013 LISTER  
I 006 LOCK FILES  
I 009 LOWER CASE INPUT DEMO  
I 002 MAP SECTORS LHS  
B 005 MAP SECTORS LHS.X  
I 010 MAP SECTORS PAYMAR 2  
I 017 MAP SECTORS->NEEDS WORK  
I 008 MEMORY AVAILABLE 32K ONLY  
I 004 MEMORY TEST WAXER  
I 003 RAM TO ROM AB  
I 012 RENUMBER  
I 008 RENUMBER APPEND  
I 004 RENUMBER WARNING  
I 002 SECTOR COUNT FIX  
B 005 SECTOR COUNT FIX.X  
I 005 SECTOR READ WRITE  
B 003 Z APPEND  
I 003 Z APPEND MEMTEST VERIFY DOC  
B 003 Z MEMTEST  
B 002 Z VERIFY



# WHAT IT ALL MEANS.....

I - Integer BASIC Program  
 A - Applesoft BASIC Program  
 B - Binary Program (Assembly Language)  
 T - Text File (Data File)  
 \* - File is LOCKED  
 HELLO - Program Title  
 003 - Program Size in Disk Sectors

## Utility 220

A 005 AAA MESSAGE  
 B 012 ALL PURPOSE DISASMB.(B00)  
 B 012 ALL PURPOSE DISASMB.(B000)  
 A 012 AMPERSAND CATALOG  
 A 009 APPLEBETIZE  
 T 003 APPLESOFT TO TEXT (EXEC)  
 I 006 APPLEWRITER TO TEXT  
 B 002 APPLEWRITER TO TEXT.OBJ  
 I 002 ASSEMBLER  
 B 021 ASSEMBLER.X  
 A 013 AUTO NUMBER II  
 A 010 AUTOSTART ROM EDITOR  
 B 002 AUTOSTART ROM EDITOR.X  
 A 006 BACKWARD MEMORY MOVE  
 A 007 BASE CONVERT  
 T 002 BINADR  
 A 003 BINADR CREATE  
 A 007 BINARY LINK TO AB  
 B 002 CMP D1 & D2 AFTER COPY  
 A 002 COPY LHS  
 B 009 COPY LHS.X  
 A 004 CREATE RESTORE LN  
 A 007 CTRL CHAR FIND  
 A 002 CURSOR DASH  
 A 003 CURSOR NO FLASH  
 B 002 DFIND  
 A 003 DFIND & FIND INSTR  
 B 002 FIND  
 A 004 GARBAGE  
 A 005 HIDE PROGRAM NAME  
 T 004 INTEGER TO TEXT (EXEC)  
 B 002 KEYEDIT  
 A 034 KEYEDIT & UTILITY DOC  
 T 002 LINE INPUT  
 A 005 LINE INPUT IMPROVED  
 B 005 LIT  
 B 002 LIT@  
 A 009 MEM/DUMP TO TEXT FILE  
 A 006 MEMORY INTERPRETER  
 A 004 POKE FILE  
 A 009 RAM TEST 48K  
 B 005 REF  
 B 002 REF@  
 A 004 REM FORMATTER  
 I 007 TEXT FILE OUT/CPY  
 A 010 TEXT FILE OUT/CPY (FP)  
 A 004 TEXT FILE RANDOM DISPLAY  
 A 006 TEXT FILE RANDOM FROM SED  
 A 003 TEXT FILE WRITER  
 A 005 TEXT TO APFLEWRITER  
 B 005 TEXT TO APPLEWRITER.X  
 B 005 VAR  
 B 002 VAR@  
 A 005 VOLUME NAME CHANGER I  
 A 009 VOLUME NAME CHANGER II  
 A 002 WORD REPEATER  
 A 003 WORDS

## Utility 221

I 005 AAA MESSAGE  
 A 004 BASIC-INTEGER  
 B 022 BASIC-INTEGER.X  
 I 002 BOOTLEG ASSEMBLER  
 B 026 BOOTLEG ASSEMBLER.X  
 I 010 CLOCK CARD HELLO WARD  
 I 008 COPY SINGLE DRIVE 2  
 I 011 DISASSEMBLE MACHINE CODE  
 I 009 DISK QUICK  
 I 010 DISK UTILITY 1->NEEDS WORK  
 I 018 DISK UTILITY 2->NEEDS WORK  
 B 002 DISK UTILITY.X  
 I 008 ENTRY POINTS  
 I 002 JUMP POINTS BASIC  
 B 002 JUMP POINTS BASIC.X  
 I 011 MAP A FILE  
 B 005 MARKEE DOC  
 B 006 MARKEE(ML)  
 I 013 MARKEE->NEEDS WORK  
 I 010 POST EDITOR  
 T 003 REM FORMATTER IN IB  
 B 003 SWITCH  
 I 004 SWITCH DOC  
 B 003 SWITCH SETUP  
 I 005 TAPESAVE 2  
 B 013 TED II ASCII DRIVER  
 I 005 TED II ASSM LOAD SAVE  
 B 022 TED II ASSM.X  
 B 014 TED II BAUDOT DRIVER  
 B 089 TED II SOURCE  
 B 012 TEDISSEMBLER.S ?  
 I 004 TEXT FILE CLIST CREATE  
 I 008 TRACE  
 B 003 TRACE.X  
 I 012 VOLUME # CHANGER  
 T 002 XREF  
 I 004 XREF DOC  
 B 004 XREF LINE # TABLE.X  
 B 004 XREF SYMBOL TABLE.X

## Utility 222

A 005 AAA MESSAGE  
 B 002 ASCII  
 B 013 ASCII PRINTER DRIVER  
 I 003 BAUD RATE  
 I 005 BAUD RATE ADJUSTMENT  
 B 002 BAUD RATE.X  
 B 002 DRIVER A76B L176

A 005 H14 DOCUMENTATION  
 B 002 H14 DRIVER.\$300  
 B 002 H14 DRIVER.\$390  
 B 002 H14 DRIVER.\$800  
 B 002 H14 DRIVER.\$9500  
 B 003 H14 DRIVER.A\$C100.L\$FF  
 B 002 H14 DRIVER.A\$MAIL  
 A 004 H14 INSTRUCTIONS  
 I 004 ID 440 SCREEN DUMP  
 B 003 ID 440 SCREEN DUMP.X  
 I 003 IDS 255 PRINTER DEMO  
 A 048 IDS-440 LABEL MAKER  
 A 005 LABEL NUMBERING  
 T 002 LISTER  
 A 009 LISTER TRENDCOM 200  
 A 005 PAPER TIGER HGR DUMP  
 B 003 PAPER TIGER HGR DUMP.X  
 B 034 PAPER TIGER.PIC  
 A 002 PICTURE LOADER  
 A 030 PRINTER CENTRONICS 779  
 I 009 PRINTER IDS  
 I 006 PRINTER IDS SETUP 1  
 I 010 PRINTER IDS SETUP 2  
 I 010 PRINTER IP 125  
 B 002 PRINTER PATCH  
 A 021 PRINTER PATCH DOC  
 A 011 PRINTER PR40 BANNER  
 A 007 PRINTER PR40 JUSTIFY  
 A 003 PRINTER QUICK DOC  
 B 002 PRINTER QUICK DRIVER  
 B 008 RTTY A2048 L1535  
 I 003 SILENTYPE BOLD PRINT  
 B 002 SILENTYPE BOLD.X  
 B 002 TTY A880 L234  
 B 002 TTY BAUDOT  
 B 013 TTY BAUDOT DRIVER  
 B 009 TTY BAUDOT DRIVER MICRO #14  
 B 005 TWO TONE ALARM

## Utility 223

I 005 AAA MESSAGE  
 I 025 APPLEADDIX  
 A 006 APPLEADDIX NOTES  
 I 002 AUTOBOOT 16  
 B 004 AUTOBOOT 16.X  
 A 004 BASIC-INTEGER  
 B 022 BASIC-INTEGER.X  
 I 019 CATALOG CREATE  
 I 002 COPY LHS FAST  
 B 010 COPY LHS FAST.X  
 I 023 COPY MOGER 1  
 I 025 COPY MOGER 2  
 B 005 FILE #1  
 I 003 FILE DISK CATALOG  
 B 026 FILE DISK CATALOG.X  
 I 009 FREE SECTORS SCODIN (C)  
 B 003 M-A\$300L\$100  
 B 003 M1-A\$800L\$180  
 B 003 M2-A\$800L\$160  
 I 018 MAP SECTORS PAYMAR 3  
 I 015 MEMORY ADDRESSES  
 B 002 MX-A\$900L\$80  
 I 008 RENUMBER->NEEDS WORK  
 I 033 SUBROUTINE PAK  
 I 016 TYFEWRITER+SOUND ROUTINE  
 I 019 UPDATE 16  
 I 019 UPDATE 16 REVISED  
 I 002 UPDATE 16 WARNING  
 A 040 X-FILE CABINET IV  
 I 024 X-MULTIPLE DISK CATALOG

## Utility 224

A 005 AAA MESSAGE  
 B 002 APPEND BINARY TO APPLESOFT  
 B 002 APPLESOFT LINE WRITER  
 B 002 CAPTURE IB AB  
 B 002 CATALOG ANALYSIS  
 B 002 DISK SUMMARY  
 B 002 DISK SUMMARY EDIT  
 B 002 DISPLAY ASC PAGE BY PAGE  
 B 002 TAG CREDIT LINES  
 B 002 TAG EXEC  
 B 002 ERROR HANDLER  
 B 002 GREETING SUBROUTINE  
 B 002 POKE BINARY TO BASIC  
 B 002 PREFIX ADD  
 B 002 PREFIX ADD INSTR  
 B 002 PREFIX REMOVE  
 B 002 RAM TEST 48K 30 MINUTES  
 B 002 ROWRT  
 B 002 READ TRACK  
 B 002 SMALL SORT V2  
 B 002 SSM A10 CARD  
 B 002 TEST DATA I  
 B 002 TEXT FILE CHAR HEX DUMP  
 B 002 UNDELETE  
 B 002 UNDELETE 16 SECTOR  
 B 002 UNDELETE 16 SECTOR ONLY !  
 B 002 UNDELETE INSTR  
 B 002 UNDELETE INSTRUCTIONS  
 B 002 PROG.LIST

## Utility 225

A 005 AAA MESSAGE  
 B 002 BASIC-INTEGER  
 B 022 BASIC-INTEGER.X  
 B 002 BOOT 16  
 B 003 BOOT 16.X  
 B 037 COPY SINGLE DRIVE 3  
 B 003 DISK FULL 3.2.1 INVERSE  
 B 015 DISK SPACE 13  
 B 002 DISK SPACE 13.X  
 B 017 DISK SPACE 16  
 B 002 DISK SPACE 16.X  
 B 009 LINE FIND INSTR  
 B 002 LINE FIND.X

## Utility 226

B 002 DIVERSI-DDS  
 B 025 HELLO  
 B 014 ASNDIV

## Utility 227

A 005 AAA MESSAGE  
 B 002 EPI.3  
 B 002 EP2.3  
 B 002 EP3.3  
 B 003 EP4.3  
 B 002 EPSON CATALOG DBL STRIKE  
 B 002 EPSON DRIVER INSTR  
 B 002 EPSON DRIVER.  
 B 002 EPSON GREETING  
 B 002 EPSON LABELS I  
 B 002 EPSON LABELS II  
 B 002 EPSON LABELS III

A 002 EPSON LOWER CASE  
 A 003 EPSON MX80 CATALOG  
 A 005 EPSON MX80 DEMO I  
 A 007 EPSON MX80 DEMO II  
 A 024 EPSON MX80 LABEL MAKER I  
 A 052 EPSON MX80 LABEL MAKER II  
 A 053 EPSON MX80 LABEL MAKER III  
 B 034 EPSON MX80 LABEL.PIC  
 A 003 EPSON MX80 LETTERHEAD  
 A 015 EPSON MX80 PROGRAM LIST  
 A 023 EPSON MX80 REMINDER CALENDAR  
 A 033 EPSON MX80 SETUP I  
 A 033 EPSON MX80 SETUP II  
 \*A 005 EPSON UTILITY 3.3 DEMO  
 \*A 023 EPSON UTILITY 3.3 INFO  
 A 022 EPSON WORD GAME  
 \*A 003 EPSON.EXEC.MAKER.A3.3  
 \*I 003 EPSON.EXEC.MAKER.I3.3  
 B 005 TEXT.DEMO  
 B 004 TEXT.MXTEST  
 T 002 XEPSON.V3.3

## Utility 228

A 005 AAA MESSAGE  
 A 009 EPSON HIRES DUMP (C) III  
 A 005 EPSON HIRES DUMP INSTRUCTIONS  
 B 003 EPSON.HIRES.OBJ  
 T 002 DRG  
 A 004 TRIM  
 T 002 TRIM.DAT  
 T 002 TYMAC  
 B 034 BESSEL  
 B 034 BESSEL 2  
 B 034 BURT  
 B 034 CHART  
 B 034 CHESS  
 B 034 DISNEY CHAR  
 B 034 INVADERS  
 B 034 PORTRAIT  
 B 034 SCHEMATIC  
 A 010 EPSON HIRES DUMP (C) I  
 A 010 EPSON HIRES DUMP (C) II  
 A 009 EPSON DUMP IMPROVED (C)  
 B 003 EPSON DUMP IMPROVED.X

## Utility 229

A 002 ONE-KEY DOS  
 \*B 032 @CONVERTING  
 \*B 027 @FEATURES  
 \*B 015 @INTRO  
 \*B 011 @LICENSES  
 \*B 015 @TECH NOTES  
 \*B 020 @WHICH DOS  
 \*B 033 A.PIC  
 \*B 013 AUDREY  
 \*B 033 B.PIC  
 \*B 033 C.PIC  
 \*A 002 CONNIE  
 \*B 033 COVER.01  
 \*B 033 D.PIC  
 \*B 007 DKEY  
 \*B 033 E.PIC  
 \*B 033 F.PIC  
 \*B 033 G.PIC  
 \*B 033 H.PIC  
 \*A 002 HELLO  
 \*A 006 MENU  
 \*A 010 SLIDE SHOW  
 \*B 007 SUBS  
 \*B 007 VERT

## AAA Title Library 250

A 002 FORMERLY LIBRARY 007  
 A 006 AAA MESSAGE  
 A 005 HELLO  
 B 006 HELLO.X  
 I 002 HELLO.Y  
 B 042 INTBASIC  
 A 066 DOCUMENTATION-RED PRINTER  
 I 003 FILE DISK CATALOG  
 \*B 026 FILE DISK CATALOG.X  
 B 009 FILE DISK MERGER.X  
 B 111 FILE #A  
 B 063 FILE #E  
 B 068 FILE #L  
 B 069 FILE #R

## Apple Bank 253

I 054 ADD LIBS (C)  
 A 007 BASE CONVERTER (C)  
 I 016 BLACKJACK 1 (C)  
 A 022 BONE TUMOR DIAGNOSIS (C)  
 I 008 CATCH (C)  
 I 026 CHASER (C)  
 I 005 CHR\$ FUNCTION (C)  
 I 007 COPY APPLE 1 (C)  
 B 007 COPY APPLE 1.X  
 I 019 HAMMURABI (C)  
 I 009 MASTERMIND (C)  
 I 010 MATH COLOR (C)  
 I 006 MORSE CODE TRANSLATOR (C)  
 I 008 NIGHTMARE 6 (C)  
 I 009 OTHELLO (C)  
 I 029 PINBALL (C)  
 I 024 SEVEN (C)  
 I 012 SINK THE SHIP (C)  
 I 018 SLOT MACHINE (C)  
 I 018 TOWERS OF HANOI (C)  
 I 008 TWENTY THREE BRICKS (C)  
 I 028 U BOAT MISSION (C)  
 I 045 YAHTZEE (C)

## Apple Bank 254

A 015 AIRFOIL DESIGNER (C)  
 I 048 AMERICAN PROBABILITY MACH (C)  
 I 015 ART KALEIDOSCOPE (C)  
 I 093 CA DRIVER TEST (C)  
 I 014 COPY APPLE (C)  
 I 008 COPY APPLE 2 (C)  
 B 007 COPY APPLE 2.X  
 I 015 ENGINE (C)  
 I 065 INFINITE MONKEYS TUTOR 2 (C)  
 B 006 INTEGER HIRES  
 I 022 INTERCEPT (C)  
 A 030 MICROLISP (C)  
 I 015 SHOOTOUT (C)  
 A 011 UP LO CASE ROUTINE (C)  
 B 003 UP LO CASE ROUTINE.X  
 B 006 UP LO CASE ROUTINE.Y



# PSCAL01:

TITLE.CODE 4 9-Dec-80 6 Code  
 INTRO.TEXT 26 15-Feb-80 10 Text  
 POLICY.TEXT 18 30-Mar-80 36 Text  
 BUGS.TEXT 18 9-Aug-80 54 Text  
 DOS3.2A.TEXT 42 28-Jan-80 72 Text  
 DOS3.2B.TEXT 42 28-Jan-80 114 Text  
 DOS3.2C.TEXT 14 14-Jul-80 156 Text  
 COMBINES.TEXT 8 9-Oct-79 170 Text  
 COMBINES.CODE 4 5-Apr-80 178 Code  
 CHASE.TEXT 22 22-Nov-80 182 Text  
 CHASE.CODE 10 22-Nov-80 204 Code  
 LIST.TEXT 12 4-Feb-80 214 Text  
 LIST.CODE 5 5-Apr-80 226 Code  
 INTRINSIC.TEXT 6 7-May-80 231 Text  
 UNITS.DOC.TEXT 12 12-Mar-80 237 Text  
 TYPESET.TEXT 12 29-Nov-78 249 Text  
 TYPESET.CODE 5 5-Apr-80 261 Code  
 UNIVERSAL.TEXT 12 1-Apr-80 266 Text  
 < UNUSED > 2 278  
 18/18 files, 2 unused, 2 in largest

# PSCAL02:

PILOT.TEXT 12 5-Jul-80 6 Text  
 PILOT.CODE 8 5-Jul-80 18 Code  
 PILOT.DOC.TEXT 16 5-Jul-80 26 Text  
 PRETTY.CODE 11 5-Apr-80 42 Code  
 PRETTY.TEXT 36 2-Oct-79 53 Text  
 PRETTY.DOC.TEXT 10 14-Feb-80 89 Text  
 FORMAT2.TEXT 28 16-Nov-79 99 Text  
 BLACKJACK.TEXT 20 27-Nov-80 127 Text  
 BLACKJACK.CODE 8 27-Nov-80 147 Code  
 FORMAT.TEXT 20 16-Nov-79 155 Text  
 FORMAT.DOC.TEXT 30 18-Feb-80 175 Text  
 FORMAT.CODE 20 5-Apr-80 205 Code  
 FORMAT1.TEXT 34 13-Nov-79 225 Text  
 FLOWER.TEXT 6 5-May-80 259 Text  
 STARS.TEXT 6 6-May-80 265 Text  
 SQUARES.TEXT 4 6-May-80 271 Text  
 < UNUSED > 5 275  
 16/16 files, 5 unused, 5 in largest

# PSCAL03:

DRAWLINE.TEXT 6 9-Oct-80 6 Text  
 DRAWLINE.CODE 2 9-Oct-80 12 Code  
 MOTGEN.TEXT 24 8-Aug-80 14 Text  
 MOTGEN.CODE 8 1-Aug-80 38 Code  
 MUD.BUDDO.TEXT 16 4-Aug-80 46 Text  
 MUD.PROC.TEXT 10 4-Aug-80 62 Text  
 MUD.PROC.CODE 3 4-Aug-80 72 Code  
 MORE.MUD.TEXT 8 14-Aug-80 75 Text  
 MUD.TEXT 34 4-Sep-80 83 Text  
 MUD.CODE 15 4-Sep-80 117 Code  
 SIEVE.CODE 2 11-Dec-79 132 Code  
 FILEID.TEXT 6 22-Jun-80 134 Text  
 FILEID.CODE 3 22-Jun-80 140 Code  
 LCM.TEXT 4 3-Nov-79 143 Text  
 LCM.CODE 2 3-Nov-79 147 Code

GC02.CODE 2 7-Sep-79 149 Code  
 GC02.TEXT 6 7-Sep-79 151 Text  
 README.TEXT 4 9-Oct-80 157 Text  
 SIEVE.TEXT 4 9-Oct-80 161 Text  
 RND.SORT.TEXT 6 10-May-80 165 Text  
 RANDOMPLOT.TEXT 4 11-May-80 171 Text  
 PRINT.OUT.TEXT 6 14-Dec-80 175 Text  
 SHELL.SORT.TEXT 6 27-May-80 181 Text  
 FIGURE.TEXT 8 29-May-80 187 Text  
 COLOR.BAR.TEXT 12 30-May-80 195 Text  
 POLAR.EX.TEXT 4 4-Jun-80 207 Text  
 REALSTR.PC.TEXT 6 25-Jun-80 211 Text  
 POLORGRAPH.TEXT 12 25-Jun-80 217 Text  
 POLORLOOP.TEXT 12 26-Jun-80 229 Text  
 EPICYCLOID.TEXT 14 3-Jul-80 241 Text  
 HYPO.THREE.TEXT 14 3-Jul-80 255 Text  
 CYL.TEXT 8 4-Jul-80 269 Text  
 < UNUSED > 3 277  
 32/32 files, 3 unused, 3 in largest

# PSCAL04:

PASCALZAP.TEXT 10 1-Mar-81 6 Text  
 PRINTNET.TEXT 24 26-Dec-80 16 Text  
 KINETICART.TEXT 10 15-Feb-81 40 Text  
 KINETICART.CODE 4 15-Feb-81 50 Code  
 PASCALZAP.CODE 6 1-Mar-81 54 Code  
 TIGERPROC.TEXT 4 8-Nov-80 60 Text  
 PRINTNET.CODE 8 26-Dec-80 64 Code  
 SAILCALC.TEXT 16 20-Dec-80 72 Text  
 SAILCALC.CODE 11 20-Dec-80 88 Code  
 CENTRON737.TEXT 6 20-Feb-81 99 Text  
 CENTRON737.CODE 4 20-Feb-81 105 Code  
 < UNUSED > 171 109  
 11/11 files, 171 unused, 171 in largest

# PSCAL05:

INTKORR.TEXT 6 17-Apr-80 6 Text  
 INTKORR.CODE 3 17-Apr-80 12 Code  
 MONITOR.DATA 8 29-Oct-80 15 Data  
 MONITOR.TEXT 6 29-Oct-80 23 Text  
 MONITOR.CODE 3 29-Oct-80 29 Code  
 SORTDEMO.TEXT 10 21-Sep-80 32 Text  
 LINEFEED.TEXT 4 17-Oct-80 42 Text  
 CROSSREF.CODE 3 8-Jan-80 46 Code  
 CROSSREF.TEXT 8 8-Jan-80 49 Text  
 SORTDEMO.CODE 4 2-Nov-80 57 Code  
 LINEFEED.CODE 2 2-Nov-80 61 Code  
 SYSTEM.CHARSET 2 14-Jun-79 63 Data  
 SYSTEM.SYNTAX 16 11-Nov-80 65 Text  
 SYNTAX.TEXT 4 12-Nov-80 81 Text  
 SYNTAX.CODE 3 12-Nov-80 85 Code  
 PI.TEXT 6 3-Feb-80 88 Text  
 HANOI.TEXT 8 12-Nov-80 94 Text  
 HANOI.CODE 3 12-Nov-80 102 Code  
 PI.CODE 4 12-Nov-80 105 Code  
 GENSORT.TEXT 10 20-Sep-80 109 Text  
 SORTDEMO2.TEXT 4 12-Nov-80 119 Text  
 SORTDEMO2.CODE 4 12-Nov-80 123 Code  
 STARTUP.TEXT 6 12-Nov-80 127 Text  
 GRUSS.TEXT 8 12-Nov-80 133 Text  
 SYSTEM.STARTUP 4 12-Nov-80 141 Code  
 < UNUSED > 135 145  
 25/25 files, 135 unused, 135 in largest

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 worthwhile

# PSCAL06:

SYSTEM.ATTACH 7 6-Feb-81 6 Code  
 ATTACHUD.CODE 8 22-Dec-80 13 Code  
 DOC.0.TEXT 26 3-Mar-81 21 Text  
 DOC.1.TEXT 30 22-Jan-81 47 Text  
 DOC.2.TEXT 16 4-Feb-81 77 Text  
 DOC.3.TEXT 22 4-Feb-81 93 Text  
 DOC.4.TEXT 18 4-Feb-81 115 Text  
 DOC.5.TEXT 28 4-Feb-81 133 Text  
 DOC.6.TEXT 24 4-Feb-81 161 Text  
 DOC.7.TEXT 24 4-Feb-81 185 Text  
 DOC.8.TEXT 28 4-Feb-81 209 Text  
 ADNRG.CODE 2 2-Mar-81 237 Code  
 ADNRG.TEXT 6 2-Mar-81 239 Text  
 LIST.TEXT 14 14-Aug-80 245 Text  
 LIST.CODE 4 14-Aug-80 259 Code  
 FORTFIX.TEXT 12 3-Mar-81 263 Text  
 FORTFIX.CODE 4 7-Jan-81 275 Code  
 NOT.USED 1 3-Mar-81 279 Data  
 18/18 files, 0 unused, 0 in largest

# PSCAL07:

PROSE.DOC.TEXT 56 13-Jul-80 6 Text  
 PROSE.DOC2.TEXT 24 13-Jul-80 62 Text  
 PROSE.PT.CODE 34 11-Oct-80 86 Code  
 DCHAYSMODEM 2 15-Jul-81 120 Data  
 MODERN.LIBRARY 40 8-Feb-81 122 Data  
 LIST.TEXT 4 6-Jul-81 162 Text  
 LOG.TEXT 4 6-Jul-81 166 Text  
 README.TEXT 4 15-Jul-81 170 Text  
 DUPE.N.LOG.TEXT 6 15-Jul-81 174 Text  
 ANSWER.TEXT 24 6-Jul-81 180 Text  
 ANSWER.CODE 30 6-Jul-81 204 Code  
 < UNUSED > 46 234  
 11/11 files, 46 unused, 46 in largest

# PSCAL08:

CLOCK.ALL.TEXT 40 26-Jul-80 6 Text  
 CLOCKSTUFF.TEXT 10 26-Jul-80 46 Text  
 CLOCK.TEXT 18 26-Jul-80 56 Text  
 CLOCK.DOC.TEXT 14 26-Jul-80 74 Text  
 ACLOCK.TEXT 20 21-Oct-80 88 Text  
 ACLOCK.CODE 5 21-Oct-80 108 Code  
 TRAN.NOTE.TEXT 4 12-Jan-81 113 Text  
 TRANSFER.TEXT 10 12-Jan-81 117 Text  
 TRANSFER.CODE 5 17-Sep-80 127 Code  
 DISASM.DOC.TEXT 8 4-Jan-81 132 Text  
 ASM.SAMPLE.TEXT 4 2-Jan-81 140 Text  
 DISASM.TEXT 26 2-Jan-81 144 Text  
 DISASM.CODE 12 2-Jan-81 170 Code  
 STARTUP.TEXT 4 10-Jan-81 182 Text  
 STARTUP.CODE 3 10-Jan-81 186 Code

DATA.TEXT 4 10-Jan-81 189 Text  
 DATA.CODE 3 10-Jan-81 193 Code  
 MINIPUB.TEXT 8 2-Feb-81 196 Text  
 MINIPUB.CODE 2 10-Jan-81 204 Code  
 PLOTTEST.TEXT 8 7-Jan-81 206 Text  
 DIARLO-DOC.TEXT 3 7-Jan-81 214 Code  
 PRTPAGE.TEXT 6 10-Aug-80 217 Text  
 LOOKIT.TEXT 3 10-Aug-80 223 Code  
 54 226  
 23 files, 54 unused, 54 in largest

# PSCAL09:

MAIN.CLK 4 15-Jul-81 6 Data  
 CLK.ALL.TEXT 40 26-Jul-80 10 Text  
 CLKSTUFF.TEXT 10 26-Jul-80 50 Text  
 CLK.TEXT 18 26-Jul-80 60 Text  
 CLK.DOC.TEXT 14 26-Jul-80 78 Text  
 CLK.CODE 20 21-Oct-80 92 Text  
 CLK.TEXT 4 12-Jan-81 112 Text  
 CLK.NOTE.TEXT 10 12-Jan-81 116 Text  
 CLKFER.TEXT 8 4-Jan-81 126 Text  
 CLK.DOC.TEXT 26 2-Jan-81 134 Text  
 CLK.SAMPLE.TEXT 4 2-Jan-81 160 Text  
 CLK.TEXT 4 10-Jan-81 164 Text  
 CLK.TEXT 4 10-Jan-81 168 Text  
 CLK.TEXT 8 2-Feb-81 172 Text  
 CLK.TEXT 8 7-Jan-81 180 Text  
 CLK.TEXT 6 10-Aug-80 188 Text  
 CLK.TEXT 4 10-Aug-80 194 Text  
 CLK.TEXT 6 14-Aug-80 198 Text  
 CLK.TEXT 6 14-Aug-80 204 Text  
 CLK.TEXT 4 26-Jul-79 210 Text  
 CLK.TEXT 4 19-Apr-80 214 Text  
 CLK.TEXT 18 18-Jun-81 218 Text  
 CLK.TEXT 14 18-Jun-81 236 Text  
 CLK.TEXT 20 18-Jun-81 250 Text  
 CLK.TEXT 8 18-Jun-81 270 Text  
 2 278  
 23 files, 2 unused, 2 in largest

# PSCAL10:

GETIME.TEXT 14 2-Jan-81 6 Text  
 REPORT.TEXT 6 6-Jan-81 20 Text  
 CKUNIT.TEXT 6 6-Jan-81 26 Text  
 CKUNIT1.CODE 4 2-Jan-81 32 Code  
 CK.DOC.TEXT 6 13-Feb-81 36 Text  
 CK.TEXT 4 14-Feb-81 42 Text  
 CK.TEXT 20 30-Sep-79 46 Text  
 CK.TEXT 10 12-Mar-81 66 Text  
 CK.TEXT 24 12-Mar-81 76 Text  
 CK.DUPLEX.TEXT 8 1-Feb-81 100 Text  
 CK.TEXT 6 1-Feb-81 108 Text  
 CK.TEXT 4 1-Feb-81 114 Text  
 CK.TEXT 16 2-Feb-81 118 Text  
 CK.TEXT 12 3-Feb-81 134 Text  
 CK.TEXT 34 7-Feb-81 146 Text  
 CK.TEXT 12 12-Mar-81 180 Text  
 CK.TEXT 12 5-Jul-80 192 Text  
 CK.TEXT 16 5-Jul-80 204 Text  
 CK.TEXT 26 16-Mar-79 220 Text  
 CK.TEXT 12 12-Mar-81 246 Text  
 CK.TEXT 12 18-May-91 258 Text  
 CK.TEXT 4 18-May-81 270 Text  
 CK.TEXT 4 15-Jul-81 274 Text  
 2 278  
 23 files, 2 unused, 2 in largest

# PSCAL11:

DIAPLOT.TEXT 18 4-Jul-80 6 Text  
 DIABLO.TEXT 24 26-Jul-79 24 Text  
 MINIPUB.TEXT 6 12-Jul-80 48 Text  
 MINIPUB.CODE 7 12-Jul-80 54 Code  
 PLOTTEST.TEXT 4 4-Jul-80 61 Text  
 DIARLO-DOC.TEXT 22 21-Sep-80 65 Text  
 PRTPAGE.TEXT 10 2-Feb-81 87 Text  
 LOOKIT.TEXT 4 9-Feb-81 97 Text  
 LCPAT1.1.TEXT 6 28-Dec-80 101 Text  
 MODEDEMO.TEXT 8 29-Aug-80 107 Text  
 TEMPLIB1.TEXT 10 25-Sep-80 115 Text  
 TEMPLIB1.CODE 3 25-Sep-80 125 Code  
 FLASHDEMO.TEXT 10 26-Sep-80 128 Text  
 FLASHDEMO.CODE 6 26-Sep-80 138 Code  
 ERASEDEMO.TEXT 12 26-Sep-80 144 Text  
 DATEDEMO.TEXT 6 26-Jul-79 156 Text  
 PROCLIB1.TEXT 6 15-Dec-80 162 Text  
 DCCCTL.CODE 5 11-Jan-81 168 Code  
 DCCCONTROL.TEXT 4 31-Aug-80 173 Text  
 DCCCONTROL.CODE 3 28-Sep-80 177 Code  
 DC.CODE 5 11-Jan-81 180 Code  
 DCCCTL.TEXT 38 11-Jan-81 185 Text  
 LANDER.TEXT 14 18-Jun-80 223 Text  
 ASEED.DOC.TEXT 16 9-Feb-81 237 Text  
 ASEED.DOC.CODE 13 12-Feb-81 253 Code  
 README.TEXT 12 12-Feb-81 266 Text  
 < UNUSED > 2 278  
 26/26 files, 2 unused, 2 in largest

# PSCAL12:

PAYROLL 2 15-Jul-81 6 Data  
 FD.PART3.TEXT 34 24-Oct-80 8 Text  
 FD.INTRO.CODE 7 15-Oct-80 42 Code  
 FD.PART1.TEXT 28 23-Oct-80 49 Text  
 FD.PART2.TEXT 28 24-Oct-80 77 Text  
 FILEDEMO.TEXT 40 24-Oct-80 105 Text  
 FILEDEMO.CODE 20 24-Oct-80 145 Code  
 FD.INTRO.TEXT 10 15-Dec-80 165 Text  
 README.TEXT 8 12-Mar-81 175 Text  
 DAILYLEDGER 2 15-Jul-81 183 Data  
 DAILYBUFF.TEXT 4 27-Jul-81 185 Text  
 DAYLED.TEXT 16 27-Jul-81 189 Text  
 DAYLED.CODE 8 27-Jul-81 205 Code  
 LEDGE.DOC.TEXT 4 15-Jul-81 213 Text  
 < UNUSED > 63 217  
 14/14 files, 63 unused, 63 in largest

# PSCAL13:

OTH.TEXT 14 8-Jun-80 6 Text  
 DRAW.TEXT 6 26-Jul-79 20 Text  
 TURTLE.TEXT 10 29-Jan-80 26 Text  
 PIECEMAKER.TEXT 6 8-Jun-80 36 Text  
 DIFF.TEXT 24 26-Jul-79 42 Text  
 CHESS.TEXT 14 31-Jan-80 66 Text  
 OTHELLO.TEXT 14 26-Jul-79 80 Text  
 DAVE.TEXT 4 25-Feb-80 94 Text  
 CHECKERS.TEXT 38 24-Jan-80 98 Text  
 RAMBI.TEXT 40 19-Nov-79 136 Text  
 LCUPDATE.TEXT 4 30-Mar-80 176 Text  
 DUMP.TEXT 14 30-Mar-80 180 Text  
 PATCH.TEXT 4 6-Apr-80 194 Text  
 PATCHER.TEXT 6 6-Apr-80 198 Text  
 TERM.TEXT 10 3-Apr-80 204 Text  
 TERM.CODE 4 19-Nov-79 214 Code  
 PARSE.TEXT 6 19-Feb-80 218 Text  
 RUNOFF.TEXT 24 9-Apr-80 224 Text  
 < UNUSED > 32 248  
 18/18 files, 32 unused, 32 in largest

# PSCAL14:

EXAMP.3E.TEXT 4 22-Mar-81 6 Text  
 EXAMP.3F.TEXT 4 22-Mar-81 10 Text  
 EXAMP.3H.TEXT 4 22-Mar-81 14 Text  
 EXAMP.3I.TEXT 4 22-Mar-81 18 Text  
 EXAMP.4B.TEXT 4 22-Mar-81 22 Text  
 EXAMP.5B.TEXT 4 22-Mar-81 26 Text  
 EXAMP.6C.TEXT 4 22-Mar-81 30 Text  
 EXAMP.6D1.TEXT 4 22-Mar-81 34 Text  
 EXAMP.5I.TEXT 4 22-Mar-81 38 Text  
 EXAMP.52.TEXT 4 22-Mar-81 42 Text  
 EXAMP.53.TEXT 4 22-Mar-81 46 Text  
 EXAMP.54.TEXT 6 22-Mar-81 50 Text  
 EXAMP.55.TEXT 4 5-Apr-81 56 Text  
 EXAMP.56.TEXT 4 5-Apr-81 60 Text  
 EXAMP.57.TEXT 4 5-Apr-81 64 Text  
 EXAMP.58.TEXT 4 5-Apr-81 68 Text  
 EXAMP.59.TEXT 4 5-Apr-81 72 Text  
 PASO.0.TEXT 4 20-Mar-81 76 Text  
 PAS1.0.TEXT 4 20-Mar-81 80 Text  
 PAS2.0.TEXT 4 20-Mar-81 84 Text  
 PAS3.0.TEXT 4 20-Mar-81 88 Text  
 PAS4.0.TEXT 4 20-Mar-81 92 Text  
 PAS1.1.TEXT 4 20-Mar-81 96 Text  
 PAS2.1.TEXT 4 20-Mar-81 100 Text  
 PAS3.1.TEXT 4 20-Mar-81 104 Text  
 PAS5.0.TEXT 4 20-Mar-81 108 Text  
 PAS4.1.TEXT 4 20-Mar-81 112 Text  
 PAS5.1.TEXT 4 20-Mar-81 116 Text  
 ASS1.1.TEXT 4 20-Mar-81 120 Text  
 ASS2.1.TEXT 4 20-Mar-81 124 Text  
 ASS3.1.TEXT 4 20-Mar-81 128 Text  
 ASS5.1.TEXT 4 20-Mar-81 132 Text  
 ASS4.1.TEXT 4 20-Mar-81 136 Text  
 EXAMP.E3B.TEXT 6 7-May-81 140 Text  
 EXAMP.E3A.TEXT 4 7-May-81 146 Text  
 EXAMP.E1.TEXT 4 7-May-81 150 Text  
 EXAMP.E2.TEXT 4 7-May-81 154 Text  
 EXAMP.E4.TEXT 4 7-May-81 158 Text  
 EXAMP.E8.TEXT 8 7-May-81 162 Text  
 EXAMP.E6B.TEXT 6 10-May-81 170 Text  
 EXAMP.E6A.TEXT 6 10-May-81 176 Text  
 EXAMP.E5.TEXT 4 10-May-81 182 Text  
 EXAMP.E7.TEXT 4 10-May-81 186 Text  
 < UNUSED > 90 190  
 43/43 files, 90 unused, 90 in largest

# PSCAL15:

GETIME.TEXT 14 2-Jan-81 6 Text  
 STRFORT.TEXT 6 6-Jan-81 20 Text  
 CLOCKUNIT.TEXT 6 6-Jan-81 26 Text  
 CLKUNT1.1.CODE 4 2-Jan-81 32 Code  
 CLOCK.DOC.TEXT 6 13-Feb-81 36 Text  
 STARTUP.TEXT 4 14-Feb-81 42 Text  
 PLOTTER.TEXT 20 30-Sep-79 46 Text  
 PLOTTER.CODE 11 30-Sep-79 66 Code  
 CASHREG.TEXT 10 12-Mar-81 77 Text  
 CHAREDIT.TEXT 24 12-Mar-81 87 Text  
 FULLDUPLEX.TEXT 8 1-Feb-81 111 Text  
 SYSGEN.TEXT 6 1-Feb-81 119 Text  
 STOP.TEXT 4 1-Feb-81 125 Text  
 NATIVECODE.TEXT 16 2-Feb-81 129 Text  
 NORMODEM.TEXT 12 3-Feb-81 145 Text  
 GENEPOOL.TEXT 34 7-Feb-81 157 Text  
 DOSCAT.TEXT 12 12-Mar-81 191 Text  
 DOSCAT.CODE 5 12-Mar-81 203 Code  
 PILOT.TEXT 12 5-Jul-80 208 Text  
 PILOT.DOC.TEXT 16 5-Jul-80 220 Text  
 GERTS.TEXT 26 16-Mar-79 236 Text  
 README.TEXT 12 12-Mar-81 262 Text  
 < UNUSED > 6 274  
 22/22 files, 6 unused, 6 in largest



# PSCAL 16:

MODEM.LIBRARY	40	8-Feb-81	6	Data
FILER.IMPL.CODE	0	14-Aug-80	46	Code
SYSTEM.LINKER	24	16-Sep-80	46	Code
SYSTEM.COMPILER	75	19-Sep-80	70	Code
< UNUSED >	6		145	
LIST.TEXT	4	6-Jul-81	151	Text
< UNUSED >	4		155	
ANSWER.TEXT	24	6-Jul-81	159	Text
< UNUSED >	30		183	
ANSWER.CODE	30	6-Jul-81	213	Code
LOG.TEXT	4	6-Jul-81	243	Text
< UNUSED >	33		247	
8/8 files, 73 unused, 33 in largest				

# PSCAL 17:

FIRSTPART.TEXT	12	13-Jun-81	6	Text
FIRSTPART.CODE	9	13-Jun-81	18	Code
MAINCAT.CODE	19	17-Jun-81	27	Code
MAINCAT.TEXT	34	17-Jun-81	46	Text
CATALOG.CODE	20	17-Jun-81	80	Code
JOHN.DOC.TEXT	4	17-Jun-81	100	Text
CAT3.TEXT	20	4-Jun-81	104	Text
CAT1.TEXT	20	4-Jun-81	124	Text
CAT2.TEXT	22	4-Jun-81	144	Text
CAT.TEXT	4	4-Jun-81	166	Text
CAT.CODE	22	4-Jun-81	170	Code
JIM.DOC.TEXT	6	4-Jun-81	192	Text
< UNUSED >	82		198	
12/12 files, 82 unused, 82 in largest				

# PSCAL 18:

BIOSEDOC.TEXT	6	28-Nov-80	6	Text
BIOSEMO.TEXT	8	27-Nov-80	12	Text
BIOSTUFF.TEXT	16	1-Feb-81	20	Text
BIOUNIT.TEXT	4	16-Mar-81	36	Text
YUNASH.CODE	12	31-Jan-81	40	Code
UNASH.INFO.TEXT	6	1-Feb-81	52	Text
X.TRACE.TEXT	12	1-Feb-81	58	Text
X.SPY.TEXT	6	1-Feb-81	70	Text
SETUPMX80.TEXT	10	18-Mar-81	76	Text
BURTS-DUMP.TEXT	20	29-Dec-80	86	Text
EIGHTO.TEXT	10	16-Feb-81	106	Text
DATE.TEXT	4	16-Feb-81	116	Text
MASTERCA.TEXT	18	6-Jan-81	120	Text
TIGER.UNIT.CODE	3	14-Aug-80	138	Code
TIGER.TEXT	4	23-Jan-81	141	Text
SCRNBYT.TEXT	10	23-Jan-81	145	Text
PRINTSET.TEXT	6	15-Sep-80	155	Text
MASTER1.TEXT	18	15-Sep-80	161	Text
PILOT.TEXT	12	27-Aug-80	179	Text
TWOB.TEXT	10	4-Oct-80	191	Text
PRETTYPAS.TEXT	20	7-Nov-80	201	Text
BLIZZARD.CODE	9	26-Jul-79	221	Code
GROCERY.TEXT	26	15-Dec-79	230	Text
MASTER.TEXT	8	2-Dec-79	256	Text
PIG3.TEXT	14	17-Mar-81	264	Text
< UNUSED >	2		278	
25/25 files, 2 unused, 2 in largest				

# PSCAL 19:

EPSON.UNIT.TEXT	6	13-Mar-82	6	Text
EPSON.UNIT.CODE	3	13-Mar-82	12	Code
SMARTERM.TEXT	4	13-Mar-82	15	Text
SMARTERM.CODE	3	13-Mar-82	19	Code
CHAREDIT.TEXT	20	16-Mar-82	22	Text
CHAREDIT.CODE	7	16-Mar-82	42	Code
GRAFEDIT.TEXT	38	16-Mar-82	49	Text
GRAFEDIT.CODE	12	16-Mar-82	87	Code
SHOWFOTO.TEXT	6	16-Mar-82	99	Text
SHOWFOTO.CODE	2	16-Mar-82	105	Code
CONCORD.TEXT	8	13-Mar-82	107	Text
CONCORD.CODE	3	13-Mar-82	115	Code
DISKUMP.TEXT	12	14-Mar-82	118	Text
DISKUMP.CODE	4	14-Mar-82	130	Code
STARTUP.TEXT	10	14-Mar-82	134	Text
STARTUP.CODE	4	14-Mar-82	144	Code
SNOWFLAKE.TEXT	8	16-Mar-82	148	Text
SNOWFLAKE.CODE	3	16-Mar-82	156	Code
TURTLE.TEXT	10	16-Mar-82	159	Text
TURTLE.CODE	4	16-Mar-82	169	Code
READ.ME.TEXT	6	16-Mar-82	173	Text
< UNUSED >	101		179	
21/21 files, 101 unused, 101 in largest				

# PSCAL 20:

PROSE.DOC1.TEXT	36	29-Mar-80	6	Text
PROSE.DOC2.TEXT	36	25-Mar-80	42	Text
PROSE.CODE	34	11-Jun-80	78	Code
UNIVERSAL.TEXT	12	1-Apr-80	112	Text
POLICY.DOC.TEXT	18	30-Mar-80	124	Text
CATALOG.3.TEXT	8	31-Mar-80	142	Text
CHASE.TEXT	22	25-Jun-80	150	Text
OTHELLD.TEXT	12	7-Oct-79	172	Text
OTHELL1.TEXT	16	7-Oct-79	184	Text
OTHELL2.TEXT	16	7-Oct-79	200	Text
OTHELLINIT.TEXT	16	8-Oct-79	216	Text
BLACKJACK.TEXT	20	25-Jun-80	232	Text
DEBTS.TEXT	26	25-Jun-80	252	Text
STORE.DATA	1	25-Jun-80	278	Data
< UNUSED >	1		279	
14/14 files, 1 unused, 1 in largest				

# PSCAL 21:

LINEDEMO.TEXT	4	21-Nov-80	6	Text
LINEDEMO.CODE	2	21-Nov-80	10	Code
ROMANUMS.TEXT	6	21-Nov-80	12	Text
ROMANUMS.CODE	2	21-Nov-80	18	Code
TABDEMO.TEXT	4	12-Jun-80	20	Text
TABDEMO.CODE	2	12-Jun-80	24	Code
NONDATE.CODE	2	31-Dec-80	26	Code
NONDATE.TEXT	8	31-Dec-80	28	Text
POWER.TEXT	4	31-Dec-80	36	Text
POWER.CODE	2	31-Dec-80	40	Code
DECIMALROM.TEXT	6	31-Dec-80	42	Text
DECIMALROM.CODE	3	31-Dec-80	48	Code
ADDFRACTNS.TEXT	6	31-Dec-80	51	Text
ADDFRACTNS.CODE	3	31-Dec-80	57	Code
DISC.TEXT	12	31-Dec-80	60	Text
DISC.CODE	6	31-Dec-80	72	Code

SLOMESSAGE.TEXT	6	31-Dec-80	78	Text
SLOMESSAGE.CODE	2	1-Jan-81	84	Code
CRAWLER1.TEXT	6	21-Sep-80	86	Text
CRAWLER1.CODE	2	21-Sep-80	92	Code
WINDCHILL.TEXT	6	1-Jan-81	94	Text
WINDCHILL.CODE	3	1-Jan-81	100	Code
DEMOfUNCT1.TEXT	6	1-Jan-81	103	Text
DEMOfUNCT1.CODE	3	1-Jan-81	109	Code
ERASERS.TEXT	6	1-Jan-81	112	Text
ERASERS.CODE	3	1-Jan-81	118	Code
PCNTSOLVER.TEXT	6	1-Jan-81	121	Text
PCNTSOLVER.CODE	4	1-Jan-81	127	Code
PR737.TEXT	6	1-Jan-81	131	Text
PRINTSET.TEXT	6	1-Jan-81	137	Text
LOCASE.ART.TEXT	6	10-Oct-80	143	Text
FILEPATCH.TEXT	8	1-Jan-81	149	Text
ROMTEST.CODE	2	1-Jan-81	157	Code
ROMTEST.TEXT	8	1-Jan-81	159	Text
MASTCAT.TEXT	16	1-Jan-81	167	Text
MASTCAT.CODE	5	1-Jan-81	183	Code
CAT.INTRO.TEXT	4	1-Jan-81	188	Text
CRYPTOGRAM.CODE	4	1-Jan-81	192	Code
CRYPTOGRAM.TEXT	8	1-Jan-81	196	Text
SPLTSCREEN.TEXT	4	10-Jan-81	204	Text
SPLTSCREEN.CODE	2	10-Jan-81	208	Code
RANDALPHAX.TEXT	4	10-Jan-81	210	Text
RANDALPHAX.CODE	2	10-Jan-81	214	Code
RANDALPHA1.TEXT	6	10-Jan-81	216	Text
RANDALPHA1.CODE	2	10-Jan-81	222	Code
RANDALPHA2.TEXT	6	10-Jan-81	224	Text
RANDALPHA2.CODE	2	10-Jan-81	230	Code
DIR.TEXT	10	26-Jul-79	232	Text
DIR.CODE	2	26-Jul-79	242	Code
< UNUSED >	36		244	
49/49 files, 36 unused, 36 in largest				

# PSCAL 22:

INDEXTODOM.TEXT	8	2-Apr-81	6	Text
PROVERBS4.TEXT	8	20-Mar-81	14	Text
AXIONS.TEXT	4	20-Mar-81	22	Text
ARRAYSEARCH.TEXT	8	2-Apr-81	26	Text
STANDEVIAT.TEXT	8	26-Jan-81	34	Text
NEWCARBUY.TEXT	6	21-Feb-81	42	Text
FILEDEMO7.TEXT	10	17-Mar-81	48	Text
DRAFTSMAN.TEXT	4	27-Feb-81	58	Text
CROSSWORD.TEXT	30	6-Mar-81	62	Text
DOCUMENT.TEXT	18	12-Jan-81	92	Text
FORMAT.TEXT	10	10-Jan-81	110	Text
MONEY.TEXT	4	12-Jan-81	120	Text
UNSTRING.TEXT	6	12-Jan-81	124	Text
FILEBURP.TEXT	8	20-Dec-80	130	Text
DOSPASCAL.TEXT	10	20-Jan-81	138	Text
FORMATUNIT.TEXT	14	26-Jan-81	148	Text
CLEAN.TEXT	6	15-Feb-81	162	Text
CLEAN2.TEXT	6	16-Feb-81	168	Text
FILEMAKER.TEXT	4	16-Feb-81	174	Text
HOWTO.TEXT	6	2-Apr-81	178	Text
NATIVECODE.TEXT	16	4-Feb-81	184	Text
MICRO.TEXT	12	4-Feb-81	200	Text
SYSGEN.TEXT	6	4-Feb-81	212	Text
STARTGEN.TEXT	4	4-Feb-81	218	Text
FULL.TEXT	8	5-Feb-81	222	Text
NATIVECODE.CODE	3	5-Feb-81	230	Code
MICRO.CODE	6	5-Feb-81	233	Code
MICRO.LINK	5	5-Feb-81	239	Data
FULLDUPLEX.CODE	4	6-Feb-81	244	Code
SYSGEN.CODE	3	5-Feb-81	248	Code
STARTUP.CODE	2	5-Feb-81	251	Code
< UNUSED >	27		253	
31/31 files, 27 unused, 27 in largest				

# 23:

INDEX.TO.VOLUME	6	23-Jan-81	6	Text
CRYPTOGRAM.TEXT	8	18-Nov-80	12	Text
SPLITSORN.TEXT	6	23-Nov-80	20	Text
SUMOFNUMS.TEXT	6	26-Nov-80	26	Text
MINIMAX.TEXT	6	30-Nov-80	32	Text
ROOTNUMBER.TEXT	6	16-Dec-80	38	Text
LOGANDBASE.TEXT	6	22-Dec-80	44	Text
PERMCOMB1.TEXT	8	1-Jan-81	50	Text
RIGCOMBIN1.TEXT	8	22-Dec-80	58	Text
RANDALPHAX.TEXT	6	4-Jan-81	66	Text
RANDALPHA1.TEXT	6	27-Dec-80	72	Text
RANDALPHA2.TEXT	6	23-Dec-80	78	Text
RANDALPHA3.TEXT	6	27-Dec-80	84	Text
RANDALPHA4.TEXT	6	27-Dec-80	90	Text
MASTERCA.TEXT	18	6-Jan-81	96	Text
NEWDIR.TEXT	10	7-Jan-81	114	Text
TIGER.UNIT.CODE	3	14-Aug-80	124	Code
TIGER.TEXT	4	23-Jan-81	127	Text
SCRNBYT.TEXT	10	23-Jan-81	131	Text
SKETCH2.TEXT	6	26-Feb-80	141	Text
EOP.TEXT	8	27-Mar-80	147	Text
DISKDATE.TEXT	6	16-Feb-80	155	Text
MODEMTEST.TEXT	12	17-Apr-80	161	Text
FILEPATCH.TEXT	8	16-Apr-80	173	Text
CHECKBOOK.TEXT	38	17-Apr-80	181	Text
< UNUSED >	61		219	
25/25 files, 61 unused, 61 in largest				

# PSCAL 25:

INDEX.TO.VOLUME	6	23-Jan-81	6	Text
CRYPTOGRAM.TEXT	8	18-Nov-80	12	Text
SPLITSORN.TEXT	6	23-Nov-80	20	Text
SUMOFNUMS.TEXT	6	26-Nov-80	26	Text
MINIMAX.TEXT	6	30-Nov-80	32	Text
ROOTNUMBER.TEXT	6	16-Dec-80	38	Text
LOGANDBASE.TEXT	6	22-Dec-80	44	Text
PERMCOMB1.TEXT	8	1-Jan-81	50	Text
RIGCOMBIN1.TEXT	8	22-Dec-80	58	Text
RANDALPHAX.TEXT	6	4-Jan-81	66	Text
RANDALPHA1.TEXT	6	27-Dec-80	72	Text
RANDALPHA2.TEXT	6	23-Dec-80	78	Text
RANDALPHA3.TEXT	6	27-Dec-80	84	Text
RANDALPHA4.TEXT	6	27-Dec-80	90	Text
MASTERCA.TEXT	18	6-Jan-81	96	Text
NEWDIR.TEXT	10	7-Jan-81	114	Text
TIGER.UNIT.CODE	3	14-Aug-80	124	Code
TIGER.TEXT	4	23-Jan-81	127	Text
SCRNBYT.TEXT	10	23-Jan-81	131	Text
SKETCH2.TEXT	6	26-Feb-80	141	Text
EOP.TEXT	8	27-Mar-80	147	Text
DISKDATE.TEXT	6	16-Feb-80	155	Text
MODEMTEST.TEXT	12	17-Apr-80	161	Text
FILEPATCH.TEXT	8	16-Apr-80	173	Text
CHECKBOOK.TEXT	38	17-Apr-80	181	Text
< UNUSED >	61		219	
25/25 files, 61 unused, 61 in largest				

# PSCAL 26:

MAKEMENU.TEXT	8	22-Oct-81	6	Text
CENTERDEMO.TEXT	6	2-Nov-81	14	Text
ARROWSMITH.TEXT	16	27-Oct-81	20	Text
FORMATTER2.TEXT	6	13-Sep-81	36	Text
STEPOF52.TEXT	6	4-Aug-81	42	Text
CHARCOUNT.TEXT	6	20-Oct-81	48	Text
FLASHCARDS.TEXT	12	13-Oct-81	54	Text
XREF1.TEXT	22	20-Jun-81	66	Text
CAT.TEXT	34	5-Nov-81	88	Text
CAT.CODE	18	5-Nov-81	122	Code
MAKELESSON.TEXT	8	12-Oct-81	140	Text
MAKELESSON.CODE	4	12-Oct-81	148	Code
HOWTOUSEIT.TEXT	4	12-Oct-81	152	Text
FRENCH20.TEXT	4	10-Oct-81	156	Text
MORSE.CODE	6	1-Dec-80	160	Code
MORSE.TEXT	14	25-Apr-80	166	Text
DDM-NOTES.TEXT	6	5-Nov-81	180	Text
< UNUSED >	94		186	
17/17 files, 94 unused, 94 in largest				



### CP/M 01

B: MODEM COM: MODEM ASM: MODEM DOC: DU-V75 COM  
B: RESOURCE DOC: DU-V75 DOC: RESOURCE COM: DU/MAP2 DOC  
B: -IACDISK 001: IACDISK DOC  
A>

### CP/M 02

A: SALVO BAS: ORBIT BAS: MUGWUMP BAS: LIFE2 BAS  
A: TOWERS BAS: TARGET BAS: STARTREK BAS: TREKINST BAS  
A: RUSROU BAS: MASTRMND BAS  
A>

### CP/M 03

A: -CPM/DOM 004: / DOC: / COM: RCPM-26 LOT  
A: UNERA COM: AFMOVE ASM: AFMOVE COM: STATUS COM  
A: CAL-13 COM: CAL-13 DOC: MX80PLOT BAS: RESOURCE COM  
A: TPA COM: XDIR COM: RESOURCE DOC: ERASE COM  
A: RENAME COM  
A>

### CP/M 04

A: SD-43 COM: XMODEM COM: MISAMENU MON: CPM-NET MON  
A: ALLENTWN MON: HYDEPARK MON: COMFUSER MON: PALATINE MON  
A: MODEM COM: READ 1ST: MODEM72 COM  
A>

### CP/M 05

A: APRIL PQM: AFXMODEM COM: SD COM: -CPM/DOM 002  
A: MODEM72 AQM: MODEM7 LQB: DIR3 COM: FILES COM  
A: CRCK COM: CRC-ART DOC: AFMODEM7 DOC: AFXMDM AQM  
A: READIST : PIPV TXT  
A>

### CP/M 06

A: -CPM/DOM 001: THOUGHT : QUICKIES QBO: FIND4DDT AQM  
A: FLS COM: SQ COM: USQ COM: HELP COM  
A: RCPMLIST QOB: TYPESO DOC: TYPESO COM: DU-V75 COM  
A: SQ/USQ HOS: SQ/USQ DOC: DU-V75 AQM: HELP HLP  
A: ZSIDFIX FIX: HIMEM ASM: DU-V75 DOC: READIST  
A: UPDATE QOA: MAST CAT  
A>

### CP/M 07

A: 405IN PAT: 405OUT PAT: APFLHALT ASM: CATALOG DOC  
A: CLEAN COM: -CPM/DOM 000: CLEAN DOC: APHAYES ASM  
A: MAST BAK: APROOT2 ASM: APMODEM COM: APMODEM COM  
A: NOLF PAT: STDKEYBD PAT: APMODEM DOC: THOUGHT  
A: MLIST50 COM: MAST CAT: CAT COM: FMAP COM  
A: INDEX ASM: UCAT COM: INDEX DOC: APMODEM DOC  
A: INDEX COM  
A>

### CP/M 08

A: PIPFATCH AQM: RCPMDISK DOC: PROTECT AQM: RENAME AQM  
A: DUU AQM: DUU DOC: REZILOG MQC: REZILOG COM  
A: UNERA AQM: APSTRATUP AQM: CACHE DOC: -CPM/DOM 005  
A>

### Eamon Utility 1

T 007 APPEND SAVE BASE  
T 007 APPEND SAVE ORG  
T 006 APPEND SAVE RTN  
A 009 ARTIFACT MAINTENANCE  
A 021 BASEFIX  
A 004 CHANGE EAMON NAME  
A 036 CHARACTER BUILDER 1  
A 069 CHARACTER BUILDER 2  
A 037 CHARACTER CHANGE/DISPLAY  
A 006 CHARACTER CLONE  
A 007 CHARACTER CREATOR  
A 009 CHARACTER DISPLAY  
A 003 CHARACTER EDIT  
A 003 CHARACTER ERASE  
A 007 CHARACTER FILE CONDENSE  
A 079 CHARACTER MAINT  
A 007 CHARACTER MOVER  
A 003 CHARACTER REBIRTH  
A 003 CHARACTER RESSURECT  
T 002 CHARACTERS  
A 002 CREATE TEXT FIX BOOT  
A 005 CREATE TEXT SAVE BASE  
A 005 CREATE TEXT SAVE GAME  
A 005 CREATE TEXT SAVE ORG  
A 011 DUNGEON AID  
T 001 EAMON.DISC  
T 002 FIX BOOT PGM

### Eamon Utility 2

A 016 EAMON ADVENTURE LOGS  
A 003 EAMON CHECK  
T 009 EAMON.ADVLOG  
T 001 EAMON.DISC  
T 001 EAMON.ROOM NAMES  
T 001 EAMON.ROOMS  
T 005 EAMON.SPECLOG  
A 009 EDIT/CREATE DESCRIPTIONS  
A 005 ERASE ART EFF MON  
T 002 FIX BOOT PGM  
A 002 FIX TENDIR NAME  
A 018 FLEX DUNGEON LIST  
A 007 LABEL MAKER  
A 015 LIST CAVE OF MIND  
A 015 LIST MINOTAURS LAIR  
A 015 LIST TREASURE ISLAND  
A 003 QUICKY ROOM PRINT  
A 006 REMOVE DUMMY ARTIFACTS  
A 005 ROOM ANALYSIS  
A 010 SETUP MONSTER/ARTIFACT  
A 005 SETUP ROOM NAMES  
A 005 SETUP ROOMS  
A 003 SNAPPY LOAD  
A 008 SNAPPY MAINT 1  
A 004 SNAPPY MAINT 2  
A 015 SPEC DUNGEON LIST  
A 015 SPEC DUNGEON LIST 2  
A 004 TEST BENCH  
A 004 VIEW ROOMS1  
A 004 VIEW ROOMS2

### Eamon Utility 3

A 004 LIST MONSTER.MASTER  
A 017 MONSTER BATTLE  
A 009 MONSTER INVENTORY  
A 010 MONSTER INVENTORY VER.0  
T 190 MONSTER.MASTER

## A WORLD FAR, FAR AWAY.

# EAMON

by DONALD BROWN

You are a citizen of this weird world. You are a free person out to seek your fortune in this world of shifting laws and time. You will usually find yourself fighting terrible monsters such as orcs, trolls and dragons to get their treasures. However, at times you may find yourself fighting such varied opponents as Billy the Kid or Darth Vader! Anything can happen, anything at all.

Eamon is a fantasy role playing adventure. The computer with your help will generate your character for you and you will pretend to be that character. You will command your character into fierce battle, where hopefully you will emerge victorious and wealthy. If you survive.□

### Eamon Master 01

A 015 THE WONDERFUL WORLD OF EAMON  
B 034 EAMON.PIC  
A 022 NEW CHARACTERS  
T 004 CHARACTERS  
T 007 SNAPPY  
T 002 THE ADVENTURER  
T 002 FRESH MEAT  
A 046 MAIN HALL  
A 061 THE BEGINNERS CAVE  
T 003 EAMON.ARTIFACTS  
T 077 EAMON.DISC  
T 003 EAMON.MONSTERS  
T 002 EAMON.NAME  
T 005 EAMON.ROOM NAMES  
T 008 EAMON.ROOMS

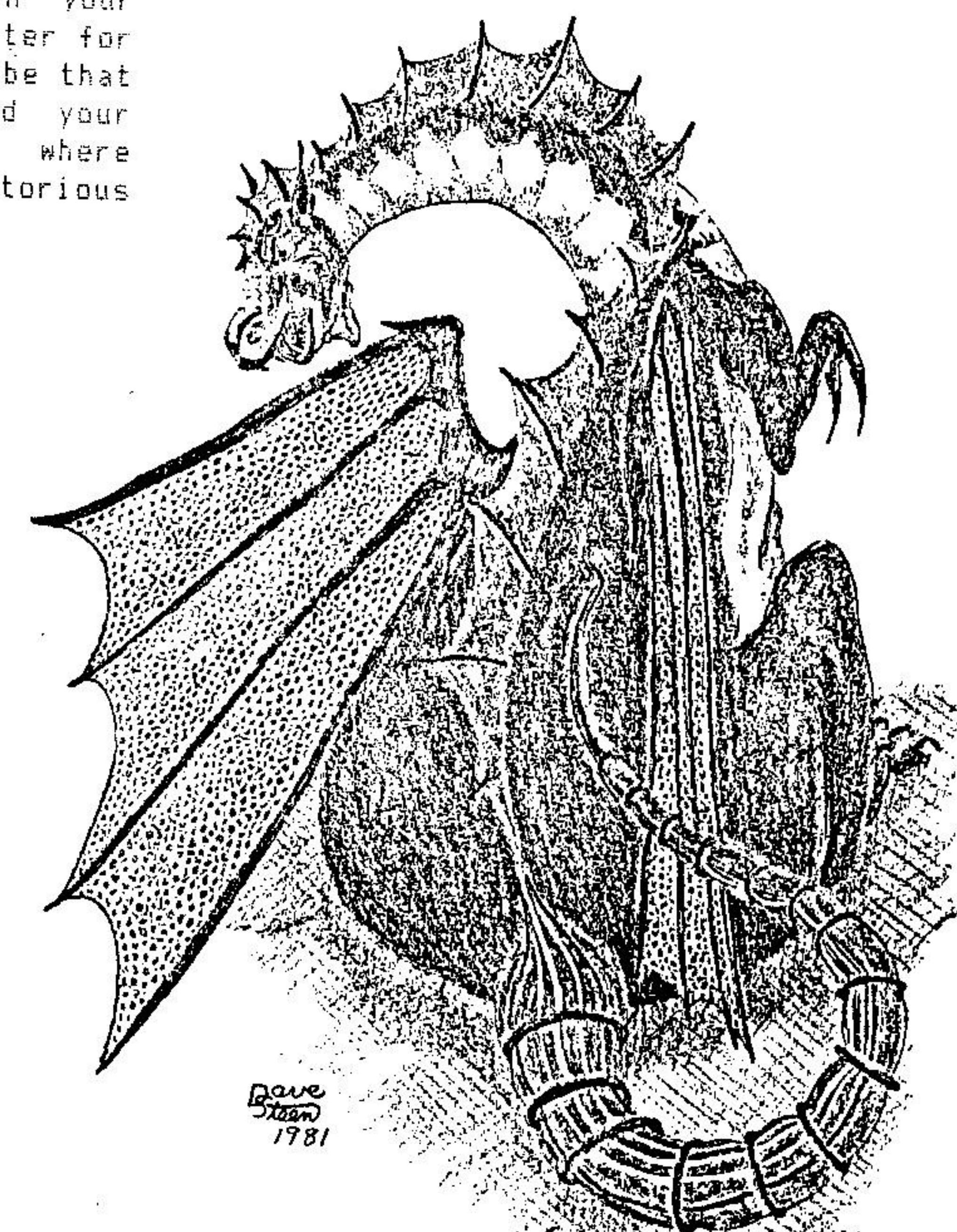
### Eamon Designer ED5

\*T 001 VERSION 5.0  
\*A 008 DUNGEON INIT  
\*A 066 DUNGEON EDIT  
\*A 015 DUNGEON LIST  
\*A 006 PRINT MANUALS  
\*A 003 LEADIN PROGRAM  
T 127 PLAYERS MANUAL.TEXT  
\*T 087 DDD MANUAL.TEXT  
\*A 019 FLEX DUNGEON LIST  
\*A 057 BASE PROGRAM 2.0  
\*A 056 BASE PROGRAM TEN

## WELCOME TO THE...

## WONDERFUL WORLD OF EAMON

Far away, at the very center of the Milky Way, is the planet of Eamon. It doesn't orbit any sun--all the stars orbit Eamon, all four billion of them. The shifting pulls of these great bodies bring strange forces to bear upon this planet; twisting light, tides, even the laws of science itself! Strange things happen there, and the citizens of Eamon must always be adaptable, for things are rarely what they seem, and even more rarely what they were yesterday!





# EAMON ADVENTURE LIST \* With SAVE Feature Aug 1983

- E01 Eamon Master (Version 4) and Beginner's Cave \*
- E02 Lair of the Minotaur \*
- E03 Cave of the Mind \*
- E04 Zyphur River Venture \*
- E05 Castle of Doom
- E06 Death Star \*
- E07 Devil's Tomb \*
- E08 Abductor's Quarters \*
- E09 Assault on the Clone Master \*
- E10 Magic Kingdom
- E11 Tomb of Molinar \*
- E12 Quest for Trezore \*
- E13 Caves of Treasure Island
- E14 Furioso
- E15 Heroes Castle \*
- E16 Caves of Mondamen
- E17 Merlin's Castle \*
- E18 Hogarth Castle
- E19 Death Trap \*
- E20 Black Death
- E21 Quest for Marron
- E22 Senator's Chambers
- E23 Temple of Ngurct
- E24 Black Mountain \*
- E25 Nuclear Nightmare
- E26 Assault on the Mole Man
- E27 Revenge of the Mole Man
- E28 Tower of London
- E29 Lost Island of Apple
- E30 Underground City
- E31 Gauntlet
- E32 House of Ill Repute \* (Obscene/Sexual)
- E33 Orb of Polaris
- E34 Death's Gateway
- E35 Lair of Mutants
- E36 Citadel of Blood
- E37 Quest for the Holy Grail
- E38 City in the Clouds
- E39 Museum of Unnatural History
- E40 Daemon's Playground
- E41 Caverns of Lanst
- E42 Alternate Beginner's Cave

## TOURNAMENT ADVENTURES

- E60 Castle of Count Fuey
- E61 Search for the Key-Part I
- E62 Rescue Mission-Part II

## EAMON UTILITIES

- ED5 Eamon Designer (Version 3)
- EU1 Eamon Utility 1
- EU2 Eamon Utility 2
- EU3 Eamon Utility 3 (Monsters)

Donald Brown  
 Donald Brown  
 R Varnum & J Jacobson  
 Jim Jacobson  
 Donald Brown  
 Donald Brown  
 Donald Brown  
 Jim Jacobson  
 Donald Brown  
 David Cook  
 Donald Brown  
 Jim Jacobson  
 P Braun & G Genz  
 William Davis  
 John Nelson  
 John Nelson  
 Randall Hersom  
 Ken Nelson  
 John Nelson  
 John Nelson  
 John Nelson  
 James Flamondon  
 James Flamondon  
 John Nelson  
 John Nelson  
 John Nelson  
 John Nelson  
 Fred & Sandy Smith  
 Donald Brown  
 Steve Adelson  
 John Nelson  
 Anonymous  
 John Nelson  
 John Nelson  
 Evan Hodson  
 Evan Hodson  
 Evan Hodson  
 Evan Hodson  
 Rick Volberding  
 Rick Volberding  
 Rick Volberding  
 Rick Volberding

Donald Brown  
 Donald Brown  
 Donald Brown

Donald Brown  
 Many  
 Many  
 John Nelson

Note: Only the title of each Eamon Adventure is shown.  
 Each title constitutes a group of programs that are on ONE disk.

# Dungeons and Dragons in the Public Domain

## EAMON

### EAMON ADVENTURES

There are now 45 adventures! Each is on a separate disk volume. The EAMON MASTER (Version 4) and the first adventure, BEGINNERS CAVE are on the same disk--E01. To run any of the adventures you must run the EAMON MASTER first!

There is also an EAMON DESIGNER volume (Version 3)--ED5, that will permit you to create your own adventure. Also on the Designer disk are 2 "manuals" that explain all the secrets of Eamon and how to design your own adventure which you may read on your monitor or print hard copy on your printer. Highly recommended for Eamon adventurers and writers are three EAMON UTILITY DISKS--EU1, 2 and 3.

### NEW EAMON NUMBERING

The growing library of Eamon Adventures required changing a few adventure numbers (which is easily done). When you complete a NEW ADVENTURE and are satisfied it is perfect then send it to 3A for exchange. We will assign the next available number. Meanwhile use any two digit number.

### EAMON NEWSLETTER

Send for your free introductory issue of the Eamon Newsletter! Now you have a way to become informed about new developments happening in the Wonderful World of Eamon. Read articles on your favorite Adventures, previews of adventures in-the-works, and more. Stay informed about new developments in the Eamon Master program and in the Utilities. Send your request for a free sample issue to KEN SHERWOOD, 117A N 25th Street, Reading \* PA \* USA \* 19606. By the way, if you are an experienced Eamon Adventurer, John and Ken invite you to write about Eamon for the newsletter.



### NATIONAL EAMON USERS CLUB

The official National Eamon Users Club is now forming to bring together all Eamon Adventurers. The purpose is to assemble knowledge of adventures, notify members of new adventures, utilities, tournaments, program bugs, new versions, improvements, features you can add yourself, ways of saving your characters, helpful hints, designing adventure tutorials, and have a great time.

A newsletter sent out to all members, meetings scheduled for Adventurers in the same region, a possible membership list to help members find other members in their region and other fantastic things not even dreamed of yet. No dues have yet been levied and will be avoided, until printing and postage costs become too much.

Send your name, address, phone and a list of the Adventures you have to: JOHN NELSON, 1226 E University, Des Moines \* IA \* USA \* 50316. □

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